REPORT

ON THE

REVISION OF SETTLEMENT

OF THE

PANIPAT TAHSIL & KARNAL PARGANAH

OF THE

KARNAL DISTRICT

1872-1880

BY

DENZIL CHARLES JELF IBBETSON

OF HER MAJESTY'S BENGAL CIVIL SERVICE

ALLAHABAD

PRINTED AT THE PIONEER PRESS

1883

No 9 dated Lahore 4th August 189

From—R. G THOMAS Esq re Officiating Senior Secretary to Financial Commissioner Punjab

To—The Officiating Junior Secretary to Government Punjab

I AM directed to submit herewith for the consideration and orders of Government a copy of the final Report by Mr D C J Ibbetson on the revised Settlement of the south eastern portion of the Karnál District comprised within the Pánipat tahsil and the Karnál pargana A copy of a review of this Report by the Commissioner of Delhi is also submitted as noted on the margin

No 4 3of nd February 1884

2 The tract of which the Settlement is now reported is a quadrilateral area of 892 square miles lying between the Jumna on the east and the highlands of Jínd and Kaithal on the west Physically it is divided into the Khadir or low land along the river and the Bangar or high lying tract beyond stretching towards Kaithal The Bangar itself is again split into two divisions by a well marked rise or step which runs very nearly along the line of the Karnál and Hánsi road The country beyond this to the north and west is a high table land known as the Nardak and largely given up to pasture The area between the Nardak and the Khadir is the Bangar properly so called and is crossed near its eastern boundary by the line of water shed between the Jumna and the Indus

The tract is crossed by the Grand Trunk Road and the Western Jumna Canal it contains 330 village areas and 936 maháls or revenue units There are two large towns Karnál and Pánipat both on the Grand Trunk Road The urban population is 48 155 souls of mixed origin The rural population is 262 157 souls divided among numerous tribes of whom the principal are Játs Rájputs Rors Gujars Shekhs and Brahmans The menial tribes and the Banyas are also numerously represented about one fifth of the whole are Muhammadans and the rest Hindus The cultivated area is 406 square miles while no less than 178 square miles or one fifth of the whole is described as barren. The remainder is devoted to pasturage

3 The re settlement of this tract was undertaken as a part of the general re settlement of the old Delhi

Division which commenced in 1872. It was known that the revenue was very unequally distributed, partly by reason of initial errors in the former assessments, and partly by the growth of large subsequent changes, both social and physical. The record of rights was notoriously defective in many cases, and seemed to require revision; while it was hoped that such an increase in revenue might be secured as would make the settlement financially advantageous. The original Notification of Settlement (No. 119) was published on 29th January 1872, and Mr. Ibbetson, who was then appointed an Assistant Settlement Officer, has been in charge of the operations throughout. Up to 19th December 1875 he was subject to the general control of Mr. Wood, the Settlement Officer of the Delhi Division; but thereafter his appointment was constituted as an independent charge. The measurements were completed and passed by the middle of 1876. The new assessments were arranged during 1877-79, and the settlement was finally wound up and declared complete by the Punjab Government Notification No. 1068 of 3rd November 1880. Thus the whole time occupied was $8\frac{3}{4}$ years, which is undoubtedly very long. At pages 233—239 of his Report, Mr. Ibbetson has explained in detail the circumstances which led to the undue protraction of the operations. The Financial Commissioner thinks there can be no doubt that the condition of the tract was such as to render the work of a re-settlement more laborious than a mere consideration of the area figures might suggest; and the difficulties which Mr. Ibbetson describes in connexion with an insufficient establishment and an empty exchequer were undoubtedly real and great. Although the long duration of settlement operations is much to be regretted, the Financial Commissioner does not think that any blame can justly be attached to Mr. Ibbetson upon this account. His only fault, if fault it can be called, was that at the outset of his operations he devoted to every part of his work a minute and careful attention which further experience has shown him to be in some part unnecessary and fruitless. This error could hardly have been avoided by an officer placed suddenly in charge of extensive operations when little more than a year old in the service.

4. The record of rights has evidently been prepared with very great care. In noticing such matters connected with it as call for remark, the Financial Commissioner will follow the order of Mr. Ibbetson's Report. Although

in some cases the results of the Patwári and professional surveys are not in close correspondence yet the reason for the divergence is fully explained by Mr Ibbetson and the settlement areas may be accepted as correct The number of separate fields to be surveyed was enormous Mr Ibbetson reckons the separate entries in the khasrahs as no fewer than 1 268 161 Under the new settlement instructions, which are now in force in the Karnál Umballa Settlement attempts are being made to simplify the record of the remaining portion of the district in this respect The adjustment of the status and rents of tenants was at first comparatively easy but Mr Ibbetson notices that disputes were subsequently engendered of several cases by the grant of reductions of assessment or by the introduction of the system of owner's rate In cases of the first kind it appears from the 616th paragraph of the Report that in the new record tenants who formerly paid at revenue rates only have not been allowed the benefit of a reduction of assessment unless the landlords acquiesced in the benefit being granted That is to say that the old rent has been treated rather as a fixed sum than as a variable rate or ratio and the new rent bearing no easily intelligible relation to the new revenue rates will probably come to be looked upon as a lump rent or ' chakota ' and treated accordingly Indirectly a very considerable effect may be produced upon the tenants thus treated and it would be interesting to know how far the Settlement entries have been accepted without contest It is worth remark that in the converse case of an increase in assessment although the landlords asked for nothing beyond the increased revenue rates yet no tenant seems to have contended for his right to continue to pay the old revenue rates only The other cause of dispute *viz* the introduction of owner's rate, is more complicated and will be noticed hereafter

Para. 608—612

The entries as to Government land have been carefully and correctly made, and the Administration papers have evidently been prepared with unusual fulness and particularity The only other points in connexion with the Record which seem to call for notice are the remarks made by Mr Ibbetson in paragraphs 638—640 as to the villages afflicted with swamp and reh In estates like these all sound Revenue Administration must be based upon regular crop inspection If a field ceases to be cropped, or if the crop

grown on it frequently fails, then it is almost certain that that field has deteriorated or gone to ruin If there are many such cases in any village, the state of that village clearly requires careful consideration The Financial Commissioner trusts that the Deputy Commissioner will pay most careful attention to the results of Girdawaris in reh-affected and swampy tracts, studying them not only for single years, but as a continuous series To facilitate this, it is more than usually necessary that the Note Books of the endangered villages should be kept written up to date It is also to be hoped that the new alignment of the canal and the extensive drainage works now in contemplation will do something to diminish the evils of both swamp and reh It is only necessary to add that the very careful enquiries made by Mr Ibbetson as to the Mandal estate and the complicated tenures of the town of Pánipat will be most useful to the officers called upon to study these important, but unattractive, subjects.

5 The assessments which Mr Ibbetson had to revise were for the most part, those made by Mr Edmonstone in 1842 in Tahsíl Panipát and in 59½ villages, which then formed part of that tahsíl, but are now included in the Karnál Pargana The remainder of the tract under settlement is the Mandal estate which forms the whole of the old, but only a part of the new, Karnál Pargana This estate has suffered much at the hands of many assessing officers, but the demand which Mr Ibbetson has now revised was finally fixed by Mr Ross in 1856 In forming his assessment circles, Mr Ibbetson followed the natural division of the country into Khádir, Bángar and Nardak The Nardak is practically confined to the Karnál tahsíl, and the small portion of it which lies in Panipát was joined with the Bángar for assessment purposes But the Khádir and the Bángar lands were treated separately in each tahsíl, and there were therefore five circles in all The share of the produce due to Government as half net profits was calculated at one-sixth on all irrigated land, and on manured dry land in the Nardak, at one-eighth in other Nardak land, and at one-fifth on all other lands The actual assessments were governed by a great variety of considerations which are fully detailed by the Settlement Officer, but they were essentially based on produce estimates checked by private judgment. The revenue rates ultimately sanctioned are shown in the annexed table, the rates used at the

former assessments now revised being added for the sake of comparison —

Soil	Circles											Remarks
	Nardak			Karnal Khádir		Karnal Bángar		Pánipat Khádir		Pánipat Bángar		
	Rs	A	P	Rs	A	Rs	A	Rs	A	Rs	A	
Irrigated	1	14	0	2	2	[illegible]	4		14	2	1	*Nardak* —The old rates for N d k illages which a e non M d l are th sam a the old rates f r l amp t Bángar *K l Kh dir* —In the new r te fl oded Rausl was r ted as Bhur The old rates given a e those of the 1847 Mandal ttle ment The r tes fo the villa es set tled in 184 are th s me t ose f r Pá p t Khádir *K ál B gar* —The ld r t s qu t d ar thos of th 1847 M ndal Settl ment The old te for the villages ettled in 1842 e the s m as those fo Pá ip t Báng
		0	0	2	8	2	8	2	10	2	1	
Flooded												
				1	8	1	8					
Dry land						1	1					
	0	13	0									
Dakar	0	1	0	1	4			1	8	1	6	
				1	4	1	0	1	[illegible]	1	6	
Rausli	0	9	0	1	4			1	8	1	6	
				1	4	1	0	1	5	1	6	
Bhur				0	10			0	8	0	12	
				0	8	0	8	1	0	1	0	
Lately abandoned												
				0	4	0	4	0	6	0	2	
Pasture	0	0	8									
				0	4	0	4	0	6	0		

In each pair of rates the lower one is that formerly in force and the upper that now adopted Thus the general pitch of the new rates is decidedly lower than that of the old and the comparatively heavy charges of the former settlements on lately abandoned and pasture land have been almost entirely foregone The detailed assessment under these rates amounted to Rs 5 40 516 an increase of about Ps 800 over the current demand At first sight this may seem a poor result to set off against an increase of 13 700 acres of culti

vation, 11,682 acres of irrigation, and the considerable and apparently permanent rise in prices But, as explained by the Settlement Officer, the rise in prices is almost exactly balanced by the reduction in the standard of assessment A great deal of the new cultivation was of very inferior quality, and not a little of the irrigated area was impoverished by over-cropping Population and the [illegible] and production had all increased Reh and swamp had developed, and the indirect taxation in the form of [illegible] had become greatly more burdensome Colonel Davies, the present Financial Commissioner, held the office of Commissioner of Delhi at the time when Mr Ibbetson made his assessments Those of Tahsil Pánipat were sanctioned by Mr Gore Ouseley as Financial Commissioner, and those of Karnal by Mr Lyall In both instances the Hon'ble the Lieutenant-Governor recorded his approval of the assessments Lieutenant Colonel Wace considers it is more to the point to rely on the opinion expressed at the time by these high authorities than to weigh the results by any opinions of his own Mr Ibbetson's task was one of exceptional difficulty, and its results deserve the cordial acceptance of Government The detailed assessments were, in a few cases, raised by the Financial Commissioner on appeal, but the increase was not such as to have any appreciable effect on the general result The incidence of the new assessment on cultivation per acre, as compared with the incidence of the current demand in 1876, and with the former assessments at introduction, is as follows —

Circle	New assessment	Current demand of 1876	Demand of 18[illegible]	Demand of 1842
	Rs A P	Rs A P	Rs A P	Rs A P
Nardak	0 11 0	1 1 5	1 1 9	1 8 4
Karnal Khádir	1 12 11	1 15 8	2 0 2	2 3 7
Karnal Bángar	2 1 8	1 11 2		2 3 7
Pánipat Khádir	2 8 0	2 6 9		2 12 5
Pánipat Bangar	2 6 8	2 5 8		2 7 [illegible]

These rates are exclusive of cesses Although the new assessment did not differ much from the old in its gross result yet the burden was very largely redistributed among the individual villages Mr Ibbetson evidently took great pains with this part of his work and the Financial Commissioner considers that his efforts to equalize the rate of taxation throughout the tract under settlement have been judicious and successful

6 The system of owner s rates was introduced into this tract for the first time under Mr Ibbetson s superintendence The owner s rate is essentially a plan to make that part of an assessment fluctuating which depends upon the value of canal irrigation The curious difficulties which attend the introduction of this plan into a tract where irrigation has been long established are explained in detail by Mr Ibbetson in his 22nd Chapter Eventually it was determined by Government that in all villages the owner s rate should be fixed at half the occupier s rate Under this ruling it became necessary first to calculate the average occupier s rate secondly to deduct half of this from the gross assessment calculated in the usual way and thirdly to announce what remained after this deduction was made as the true ordinary or fixed assessment The fixed assessment is thus made a sort of residuum from the owner s rate and must of course in some cases fail to be in reality what it purports to be The uncertainties which are inherent in the application of this plan are fully described by Mr Ibbetson , and it seems clear that if canal irrigation in any village shall seriously diminish either in quantity or value it will be necessary to reconsider the assessment as a whole It appears unnecessary to enter at present into any further discussion of the various points involved for many of these points are more or less hypothetical and though extremely embarrassing to an assessing officer are of comparatively little importance to the administrator until it becomes evident that they will cease to remain as possibilities and will establish themselves as facts

The effect of the owner s rate upon the amount of irrigation in the Pánipat Tahsíl will be apparent from the annexed table of the amount collected on account of the rate in each year from 1878 to the present day As the Karnál Pargana is only a portion of a tahsíl it is not convenient to give similar figures for that tract

Tahsil Pánipat

Year			Collection for owner's rate
			Rs
1879-80	..	..	70,755
1880-81	.		49,867
1881-82	...	..	39,761
1882-83	..		67,536
1883-84		.	67,662
1884-85	...		42,856
Total		..	3,48,367
Average			58,061

The fluctuations have thus been very violent, and a true average can perhaps hardly yet be drawn The great decrease in 1880-81 and 1881-82 is probably in part due to misapprehensions and jealousies between landlords and tenants The returns for 1882-83 and 1883-84 are, in all probability, a fair sample of the revenue which may be at present expected in ordinary years, while the return for the year 1884-85 shows how sensitive the owner's rate income is now becoming to the character of the seasons It is of course to be understood that Mr. Ibbetson deducted from his assessments, as described in the previous paragraph, the amount which he estimated would be realized for owner's rate His estimate for Tahsíl Pánipat was Rs 74,230, an amount which was nearly reached in 1879-80, but which is more than 27 per cent in excess of the average result of six years. The assessment is of course by so much rendered easier to the people

One of the most important questions connected with owner's rate is the effect which the introduction of the system may have on the relations between landlords and tenants

Many of the tenants in this part of the country have hitherto paid at revenue rates and nothing more Revenue rates have now been differentiated into owner s rate and fixed assessment and the question therefore arises as to whether the owner or the tenant should pay the owner s rate It was noted at page 4 of the Revenue Administration Report for 1880 81 that in Karnal disputes as to this had been settled by the exertions of the Deputy Commissioner on the general basis that the tenant should either pay the old revenue rate without, or the new revenue rate with the owner s rate in addition Although disputes seem to have been prevented here yet in other districts in the neighbourhood several cases of great difficulty and hardship have come before the Courts and the whole subject is one which will require very careful consideration when the Canal Act comes under revision

7 The account of the organization and habits of the people which is given in Chapters VI—IX of the Report, is full of interest This subject of sociological folklore Mr Ibbetson has made peculiarly his own and there is probably little information of importance which can be added to what he has collected The description of agricultural partnerships in paragraphs 276—281 is particularly worthy of attention and it would be interesting to know how far to the westward this system extends In the same way as a further instance of the power of voluntary organization for practical purposes the short notice of the method of village watch and ward which is given in paragraph 297 is very interesting and in fact the whole detailed description of the constitution and manner of life in the villages of the tract will be most useful and suggestive to the local officers

8 The Financial Commissioner recommends that the Record of Rights framed by Mr Ibbetson be now formally sanctioned The new assessment was introduced into Pánipat from kharif 1878, and into Pargana Karnál from kharif 1879 In order to save the necessity for varying dates the Financial Commissioner recommends that the assessment of the whole tract be now sanctioned for 30 years from kharif 1879 subject to the power reserved to Government to revise the assessment of five villages at the end of each quinquennial period as explained by Mr Ibbetson in his 752nd paragraph The cesses enumerated in paragraph 658 should also be sanctioned The first four of them are now united in the

new local rate Mr Ibbetson is correct in thinking that cesses are payable on owner's rate

9 The thanks of Government are due to Mr Ibbetson for the ability, patience and skill with which he has conducted the operations of this settlement His enquiries have been painstaking and thorough, the Record of Rights which he has prepared is most complete and accurate, and his assessments have stood the test of practical experience in a very satisfactory way The present Report is of remarkable excellence In richness of detail and interest, and in its abundance of well-arranged information, it is probably the best yet written in the Punjab It will be most useful to the District Officer, not only for what it tells, but for the lines of enquiry which it suggests The Financial Commissioner also trusts that the services of Munshi Gobind Sahai, Extra Assistant Commissioner, and Munshi Khádim Husen, Munsiff, may also be suitably acknowledged

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No 423, dated 22nd February 1884

From—J D TREMLETT, Esquire, Commissioner and Superintendent, Delhi Division,

To—The Senior Secretary to Financial Commissioner, Punjab

I HAVE the honor to submit the Settlement Report of the Panipát Tahsíl and the Karnál Pargana of Tahsíl Karnal

Long duration of the settlement operations and its causes

2 The settlement commenced in January 1872 and closed late in 1880 In paragraphs 595 to 603, Mr Ibbetson explains why it was that the work proved so long and tedious Among these causes he instances the way the settlement was underhanded, and the great delay caused by his having to teach his Patwáris to survey, without too having adequate rewards to offer them as an inducement to persevere Other circumstances which are alluded to in the Preface, by a kind of fatality, have caused an almost proportionate amount of delay in the compilation of the report, so it was not until the month of December 1883 that it reached my office If, however, the growth of the work has been slow, Mr Ibbetson may congratulate himself on having reared a forest-tree, rather than an annual, for the volume I am submitting is far more than a narrative and explanation of has settlement as a revenue and fiscal undertaking Indeed, it contains so full an account of the past annals of the country, of the manners and customs and social condition of the people, of their resources, and the climatic and other difficulties they have to grapple with, that it would be hard to exaggerate the benefit such a compilation must be to officers when first transferred to this part of the Province.

3 The early history of this part of the country owing to its near proximity to Imperial Delhi is a part of the annals of Hindustán, and the grievous days it passed through during the latter part of the XVIIIth century, almost reducing it back to its pristine solitude and desolation so that lions were hunted and tigers shot within a few miles of Karnál is no more than any student of Indian History would have anticipated would have been its lot while the house of Taimur was in its death throes and Mahratta Sikh and Pathán were quarrelling and fighting over the defenceless and powerless Provinces but I think most readers will be surprised at the gloomy details of mismanagement which Mr Ibbetson has brought to light (see paragraphs 116 to 1?8) after the country had come under British rule

E ly hi to y and condi t o of the tr ct.

4 The influence still surviving of the *thapas* dividing the people into a kind of clan will require to be carefully borne in mind It was used in determining the extent of the zails as far as possible and though it resulted in making some of them over large and too highly remunerated, this was perhaps a lesser evil than it would have been to have split up the *thapas* by counting heads and jamas only These strong clannish feelings will be of use in guiding the courts in regard to questions of adoption as the existence or non existence of a custom of adoption in any locality will be likely to turn on the further question whether cultivators are still so in request as to favour the legal fiction of incorporation as a brother (see too paragraph ?92 as to the waning custom of Ghar Jawai)

Surv al of clanship in the country

5 The opinion expressed in paragraphs 240 to 242 in regard to individual property in portions of the village estate being a creation of English ideas and proceedings is also one which it will be well to be acquainted with and to give due weight to in adjusting disputed questions of partition) see also paragraphs ?07 to 2?9)

Gr th of the i le of s ral wn rships in v llag l n l

6 In paragraphs 515 to 564 the position and prospects of the Mandal family, who occupy so prominent a position in the current administration and litigation of the district are considered Mr Ibbetson shows that except in the case of unoccupied villages which they themselves settled subsequently to their removal into the district they are mere assignees of the Government interest that is of the revenue Considering the present plight of the family is greatly due to the unwise terms of the original grant and the good service the head of the house did in helping to keep open the road and in other ways during the darkest days of the Mutiny, while Delhi still held out I think it would be a generous and a wise policy if Government would disregard advanced theories and recognizing facts as they are would pass a short Act declaring the Mandal states were to descend under a strict law of primogeniture the holder to be a life tenant, with no power to alienate or encumber the jágir to the prejudice of the heir This Act would afford

Mandal family

too a good means of settling, once for all, other matters in regard to the descent of the private property, when there was any, of the members of the family, &c

7 The report contains a very clear and intelligible account of the deep and widespread mischief done to a large part of the tract under settlement by the Western Jumna Canal owing to its faulty alignment and level to begin with, to the haste with which many of its distributaries were made to meet urgent needs, and lastly to the excessive and careless modes of irrigation practiced by the people (paragraphs 159 to 170) Gloomy as are the colours in which the Settlement Officer describes the resulting mischief, they are not in any way exaggerated, as is obvious to any one traversing the ground I was, however, glad to learn from one of the Canal Officers during my recent tour that, owing to the more economical use of canal water which now prevails, many places which he remembers as swamps of the worse nature are now greatly improved, and doubtless the opening of the new canal and the drainage cuts will, as Mr Ibbetson anticipates, go far (I hope we may say very far) to remove the evil of swamps The District Committee are also in communication with the Sahâranpur Gardens for a supply of "Sheep-bush" and "Salt-bush" plants, and I trust these and other remedies will gradually cure the "reh" evil when the fall of the water level has removed the perennial cause of the mischief

Western Jumna Canal

8 Closely connected with the canal is the new principle on which the revenue has now been assessed, partly on a so-called *dry* assessment, and partly by a water-advantage rate I am unwilling to delay this letter for the information which the next annual revenue report should furnish as to the effect which the new system has had on decreasing the water taken by the villagers The results will, I anticipate, be very considerable and when we realize how eagerly villages on the high grounds to the west are clamouring to have distributaries brought to them, one cannot but grudge every drop of water wasted, which would be so precious elsewhere The attention of the revenue authorities will have to be given to the artificial nature of the fixed part of the assessment, and the possible need of modifying it should the amount of irrigation change much in some villages, as pointed out in paragraphs 750 and 779, and in the individual village note-books

Water-advantage rate

9. I would earnestly invite the attention of Government to Mr Ibbetson's suggestion in paragraph 636 as to the desirability of providing, by legislation, that sufferers by diluvion, and those whose lands are taken up compulsorily by Government, should receive in exchange equivalent areas of common land, thus throwing the loss on the community instead of on the individual In those parts of the country where the village system is in full force, I feel no doubt that such legislation would commend itself strongly to the people's own feeling of what was right and just, while, if the principle were left to the discretion of the Local Government to make it applicable to particular

Loss of land by village proprietors

districts as seemed good the Western mode of dealing with the individual only would still prevail in localities where the village system was disintegrating or, as in some parts of the west of the Province, non existent

Accuracy of the settlement

10 With my own limited revenue experience I should deem it presumptuous to criticize the correctness of Mr Ibbetson s calculations on which he has based his assessments but to the best of my judgment Chapter XX of the Report shows that he has very carefully weighed and used all the resources open to him for arriving at a correct conclusion and the subsequent working of the settlement speaks decidedly in favor of his work

Suspension of revenue since the settlement.

11 There have been no remissions of revenue yet sanctioned In rabi 1880 81 Rs 335 4 8 was suspended in 12 jágir villages In kharif 1880 81 Rs 235 was suspended in one jágir village In rabi 1881 82 Rs 383 8 0 was suspended in three khálsa villages and Rs 4 058 12 0 in 31 jágir ones In rabi 1883 84 Rs 1 007 8 0 was suspended in three jagir villages and in kharif 1883 84 Rs 148 6 0 was suspended in two khálsa and Rs 5 338 12 0 in 27 jágir, villages The totals are therefore as follows —

Rabi 1880 81	*Kharif* 1880-81	*Rabi* 1881 82	*Rabi* 1883 84	*Kharif* 1883 84
Rs. 3 3 4 8 0	Rs 3	Rs. 4 44 4 0	Rs 1 00 8 0	Rs 5 487 4 0

All these suspensions except those of the current year (1883 84) have been since realized

Other measures for recovering the revenue

12 In 1879 80 in three cases movable property was attached to recover balances aggregating Rs 92 In 1880 81 seven lambardárs were imprisoned for two months to recover a balance of Rs 936 In 1881 82 one lambardár of Pánipat was imprisoned for 22 days for Rs 216 on account of an istamrári demand The above are the only coercive measures which have had to be adopted in realizing the revenue beyond the ordinary issue of *dastaks*, which have now come to be regarded as simple reminders

Rainfall and state of the harvests since the settlement.

18 The rainfall returns from the two stations of Karnál and Pánipat, month by month, during the time the settlement has been working are as follows —

Karnál.

MONTH.	1879	1880	1881	1882	1883	REMARKS
January		0 1		2 6	2 0	[illegible]
February	0 9	1 3	0 3	2 0	0 1	
March	0 6		0 5	0 9	1 1	
April			0 6	1 7	0 1	
May		0 5	1 4	0 7	0 1	
June	3 2	10 6	3 3	2 6	3 1	
July	8 5	13 1	8 3	7 1	7 6	
August	8 4	0 7	7 0	2 4	4 2	
September	1 3	4 8		5 1	[illegible]	
October					0 75	
November		0 1				
December	0 3	0 9			0 4	
Total	23 2	32 6	21 7	25 1	20 45	

Pánipat

MONTH.	1878	1879	1880	1881	1882	1883	REMARKS
January	1 0				2 0	2 0	Average rainfall of the Pánipat Khádar 21 inches, and of the Pánipat Bángar 20 inches, according to the Report.
February	0 4		1 0	0 4	1 3		
March	0 6	0 5		0 9		0 2	
April	3 2			1 0			
May	4 9		0 4		0 1	0 9	
June	0 4	2 6	5 4	1 3	2 0	1 0	
July	3 3	11 7	9 9	6 9	10 3	7 0	
August	11 5	6 4	2 4	7 6	3 8	0 85	
September	0 8	1 7	5 8	2 6	3 1	4 2	
October							
November						0 6	
December	0 6	1 0	2 0	..	..		
Total	29 7	23 9	26 9	20 7	22 6	16 75	

14 So far as the rain gauges at two stations make it safe to draw general conclusions, the winter rains of 1878 were fair but the autumn fall was limited in duration and excessive in August so that though the total fall was very high it was apparently not as favourable to agriculture as might have been the case The annual report describes it as not only deficient but as unseasonable and more than ordinarily sporadic Mr Benton, the then Deputy Commissioner remarks — I observe that the rainfall varies exceedingly in different parts of the district and that in consequence the rain gauge stations are insufficient for an adequate idea of the rainfall In 1879 the winter rains were poor but the summer ones were good and well distributed Owing to the early cessation of the autumn rains of 1878 the annual report describes the rabi crop of 1879 as considerably below the average except on land irrigated from the canal or from wells The kharif crop however, is described as an unusually good one In 1880 the winter rains were moderate but good in the summer lasting well into September From the same cause as in 1879 the rabi was a failure throughout the Nardak and, owing to the small fall in August the district narrowly missed having a splendid kharif crop In 1881 the winter rain was much as in the previous year and good in the summer lasting in the southern tahsil into September The rabi crop on the barani land is described in the annual report as a very short one and in the Karnál Tahsil owing to the early stopping of the rain about August 20th, the crops which had not then ripened were to a great measure a failure In 1882 the winter rains were decidedly above the average and also good and continuous in the summer The spring crop suffered from hail and west winds and some of the later kharif crops dried up owing to rain ceasing in the middle of September In 1883 the winter rains were also favourable but owing to the long break from the middle of July the autumn harvests were far worse than the merely monthly fall would have led one to anticipate

15 The foregoing review of the rainfall of the tract, together with the information afforded by the annual reports shows that the settlement has been tried by a series of years which must from various causes be held to be below the average as only the kharif of 1879 turned out to be a really bumper crop though probably the one of the following year was a very fair one

No 56 dated Lahore 5th March 1886

From—R G Thomson Esquire Offg Junior Secretary to Government Punjab

To—The Secretary to the Government of India Revenue and Agricultural Department

I am directed to forward for the information of the Government of India a copy of the Review by the Hon'ble the Lieutenant Governor, of the Final Report of the Revised Settlement of the southern portion of the Karnál District together with a copy of the papers noted in the margin and to solicit approval to the sanction of the settlement for a period of 30 years with effect from the kharif harvest of 1879

Report by Mr D C J Ibbetson

Reviews by the Commissioner of the Delhi Division and the Financial Commissioner

Proceedings of the Hon ble the L e tenant Go ernor f the Punj b in the Revenue and Agricultural Department No 55 dated 5th March 1886

READ—

The Final Report of the Revised Settlement of the Karnal District submitted by Mr D C J Ibbetson and forwarded to Government under cover of the letter of the Senior Secretary to the Financial Commissioner of the Punjab No 92? of 24th August 1885

REMARKS—The portion of the Karnál District which was placed under settlement in 1872 consists of the Pánipat tahsíl and the Karnál parganah of the Karnal tahsíl The tract is bounded on the south by the Delhi and Rohtak Districts on the west by the Jínd State and Kaithal tahsíl on the north by the Indri parganah of the Karnál tahsíl and on the east by the Western Jumna Canal The area of the tract under consideration is 892 square miles of which less than one half is cultivated The cultivation is however unevenly distributed through the various physical tracts of the district as will be seen below The area protected by irrigation from permanent sources is 265 square miles The rainfall which varies from 23 to 28 inches in the east falls to less than 18 inches in the west where it is apt to be exceedingly capricious The eastern part of the district may be considered as well protected against drought but the western portion and especially the Kaithal tahsíl which lies outside the area recently under settlement is peculiarly liable to famine The population is 312 000 of which nearly 50 000 souls are included in the towns of Karnál and Pánipat The population like the cultivation, is distributed somewhat unevenly over the tract

2 The area of the Pánipat tahsil and Karnál parganah may be divided into three well defined physical regions—*first*, the khádir or low lands along the bank of the Jumna river *secondly* the bangar or higher lands which are watered by the Western Jumna Canal and *thirdly*, the nardak

which consists of an arid table-land running to the west, and which is the home of graziers rather than of cultivators The following statement shows at a glance the principal characteristics of the three tracts --

	Total area	Percentage of				Depth to water in wells feet	Village population
		Cultivation	Irrigation to cultivation	Culturable land	Uncultur able land		
	Acres						
Khádir	162,500	55	80	28	15	15	91,000
Bangar	256,000	51	75	20	27	30	128,000
Nardak	152,000	27	.	60	11	75	12 578

From this it will be seen that a large area available for cultivation still remains in the nardak, and that a considerable area has unfortunately been rendered unculturable by the over-irrigation which has occurred in the bangar, and by the swamping and development of saline efflorescence which have resulted from this It is hoped, however, that the new alignment of the Western Jumna Canal, which is now nearly completed, and the schemes for drainage of the water-logged tracts which are under consideration, will effect a speedy amelioration in the circumstances of those villages of the bangar which have hitherto suffered from swamp and its consequences The water-shed of the great western and eastern systems of drainage in the plains of the Bengal Presidency runs, it should be noticed, along the eastern border of the bangar tract.

3 It is not necessary to do more than refer very briefly to the history of Karnál in the present review Situated on the natural high road from the north to the capital of Hindustán and at no great distance from the latter, the district has, ever since it formed the battle-ground of the Mahábhárata, seen the march of every conqueror and invader who struck at the royal city, and was the centre of the wild disorder, known to the people as the Rám Raula, which ensued while Ját, Mahratta, Sikh and Pathán were contending for the supremacy of Northern India during the

latter half of the eighteenth century Of the early days of British administration an interesting account has been given by Mr Ibbetson in his assessment reports and in the present Report So long as a system of brief summary settlements based on the collections of our predecessors and administered according to their ideas was in force the district made no real advance and in some respects actually deteriorated Fortunately as is well known other counsels prevailed as experience of the people and of country was gained and from the time of the regular settlement the progress made has been satisfactory if it has not been altogether free from certain drawbacks Among these the most noticeable is the periodical recurrence of famines of which an account is given by Mr Ibbetson at paragraphs 55, 65 and 698 of the Report

The tract under settlement like the rest of the old Delhi territory is held by strong village communities which for the most part are gathered in large homesteads In the nardak the principal landowners are Rájputs Elsewhere, excluding the town population Játs largely out number all other tribes The total number of this tribe in the whole tract is 43 000 Next in number follow the Brahmins (27 000) the Chamárs (23 000) the Rajputs (19 000) the Baniyás (17 000), the Rors Gujars and Chuhrás with 14 000 souls each and the Jhinwars 13 000 The general composition of the population of the tract does not differ greatly from that of the Delhi and Rohtak Districts and as there the trading and menial classes occupy an important place in the enumeration The Rájputs are described as brave fine men, but lazy and proud , the chief clans among them are the Chauhán and Mandhár The Jats are pre eminent as cultivators but are somewhat too independent and grasping The principal clans into which they are divided are the Jáglán Ghongás Ghotwál Deswál Katkhar Sandhu and Hulawat The Gujars are of thievish and slovenly disposition and the Brahmins are as a rule lazy and grasping The Rors are good cultivators and the village menials make strenuous farm labourers The Mussulmán owners such as the Syads and Shekhs are invariably indifferent cultivators

4 The tract in question is divided into 330 villages and 336 estates Of these 250 are held in severalty 22 accord

ing to ancestral shares, and 64 in common by the whole body of owners As a matter of fact the great majority of the so-called zemindári villages belong either to the Mandal or Skinner estate The area cultivated by the owners themselves is 167,000 acres, by tenants with right of occupancy 14,000 acres, and by tenants without a right occupancy 87,000 acres. The area held by the first class of tenants is less now than it was in 1842 Of the area held by tenants-at-will no less than 58,000 acres are cultivated on the condition of payment of land revenue and cesses alone, and real rents amounting to double the land revenue are taken on only 2,096 acres. Half the tenants-at-will pay rent at the same rates as the owners pay their revenue, a quarter more pay lump cash rents which are seldom in excess of the revenue rates and cesses, and the rest pay rent by share of produce, by crop rates, and fixed grain rates As in the case of the Delhi District, real rents are practically unknown, but it is probable that they will gradually grow up during the present settlement The Játs own 182,000 acres of the total area of the tract under consideration, Rájputs 140,000 acres, Rors 670,000 and Gújars 72,000 acres

Size of holdings

The average area of the holdings of landlords and tenants in the various tracts is as follows —Nardak 16 and 4½ acres, bangar 14 acres and 2½—4 acres, khádir 9½—13 acres and 1½—3½ acres The account given by the Settlement Officer of agricultural partnerships (paragraph 276—280) and of the growth of separate rights in property under the British rule (paragraphs 240-41) is interesting

5 The soils of the tract have been arranged according to the well-known classification of the old Delhi territory, *viz*, raush, dákar and bhur. Dákar is found principally in the depressions of the nardak and bangar, the area of raush is 81 per cent of the whole. The principal crops are coarse rice, gram and joár in the nardak, and wheat, gram, wheat and gram, joár, cotton, fine rice and sugarcane elsewhere. The number of permanent wells is 3,820, of which 3,283 are in the khádir and only 204 in the nardak The average area irrigated by the Western Jumna Canal before the

settlement was 84,000 acres but this area has since been considerably contracted The number of cattle in the tract is reported to be 223 000 of which 48 000 are plough bullocks, and the pasturage lands available amount to nearly 190 000 acres Mr Ibbetson notes (paragraph 48) that the best grasses are cut and stacked as hay and that the best pieces of grass land are often fenced in and protected (paragraphs 488 and 697)

6 Of the revenue history of the tract a full account is given in Chapter V The first summary assessments were exceedingly oppressive but the regular settlement made in 1842 at last allowed the people a fair opportunity of material improvement The revenue of the Mandal tract in the nardak was revised on several occasions after 1842 and was not finally settled until 1856 when the general assessment was reduced by 20 per cent Since then to quote the words of Mr Ibbetson, the nardak villages as far as is known have paid the demands imposed on them without any very large balances or remissions The history of the khádir has been satisfactorily monotonous but parts of the bangar have been terribly ruined by the development of swamp and saline efflorescence and by reason of the inadequate relief which has from time to time been afforded to the distressed villages It is greatly to be regretted that the steps which are now approaching completion for the re alignment of the Western Jumna Canal and for the relief of the swamped estates were not undertaken many years ago in order to remove the reproach which the state of things described by the Settlement Officer in paragraphs 158—170 of his Report has entailed upon the administration of the British Government since the date of the regular settlement

7 The progress which the tract has made since 1842 may be summed up briefly as follows —The area under cultivation has increased by 16 000 acres and that under irrigation by 15 000 acres The number of masonry wells is nearly the same as at last settlement if the statistics of that date can be trusted Communications have been greatly improved by the construction of the Grand Trunk Road which connects Karnál with the Railway at Umballa on the one side and at Delhi on the other In consequence prices have risen by one fourth at a very moderate computation The area sold and mortgaged is not large, but the Settlement Officer is of opinion

Prices

that the returns do not fully represent the facts of the case in this regard Population has increased by 15—40 per cent. in the centre and east of the tract, and by nearly 80 per cent. in the nardak The increase, however, has not been an unmixed advantage in all cases, and in some instances the land is now barely able to support the population The productive qualities of the soil are no longer so vigorous as they were, and where estates have suffered from over-irrigation and swamp these powers have seriously deteriorated On the other hand, the charges on account of cesses and occupiers rates have been greatly raised since 1842, and the standard of assessment has been reduced from two-thirds to one-half of the net assets of the land Taking all these circumstances into consideration, it was hardly to be expected that the re-settlement would result in any material addition to the revenue-roll of the tract.

8 In paragraphs 663—684 of his Report, Mr. Ibbetson has explained the general system on which he proceeded in framing his new assessment, and in Chapter XXI he has stated in detail the results arrived at in each of the five assessment circles formed by him It is to be regretted perhaps that in his final report the Settlement Officer should have dealt with assessment circles so much in detail, and should have overlooked the treatment of the tract, or at least of the physical regions into which the tract is naturally divided, as a whole This form of treatment has added considerably to the length of the Report, and makes it somewhat difficult to gain a clear idea of the general assessment of the tract Even the figured statements attached to the Report contain no statistics for the whole tract as a rule, but are confined to stating results for the various assessment circles The Financial Commissioner has already been separately addressed on this point, and it is not necessary therefore to draw further attention to it here Owing to the administrative division of tahsíls, the Settlement Officer was obliged in framing his revenue rate reports to separate the khádir and bangar country into two circles each, and these with the nardak make up five assessment circles for the whole tract The rates adopted in these circles are compared with the rates of the last settlement in the table printed at paragraph 5 of the review of the Financial Commissioner. From these it will be seen that the two sets of rates approximate one another very closely throughout, the new rates being

slightly lower than the old rates The rates adopted at recent re settlements *in the adjoining tracts contrast with those* adopted in Karnál as follows —

Tract and class of soil	Sonepat Tahsil of Delhi District	Gohana Tahsil of Rohtak District	*Karnál District* Pánipat Tahsil	*Karnál District* Karnál Tahsil
Khádar	Rs A P	Rs A P	Rs A P	Rs. A P
Well lands	12 0		2 14 0	2 0
Dakar	1 6 0		1 8 0	1 4 0
Rausli	1 6 0		1 8 0	1 4 0
Bhur	0 12 0		0 8 0	0 10 0
Bángar				
Canal lands	15 0	2 12 0	1 0	4 0
Dakar	1 8 0	1 4 0	1 6 0	1 0 0
Rausli	1 8 0	1 3 0	1 6 0	1 0 0
Bhur	0 12 0	0 10 0	0 1 0	0 8 0

The revenue resulting from these rates has been subjected to a severe test in all three districts concerned by the series of bad seasons which prevailed from 1877 to 1883 and on the whole the assessment has stood the test remarkably well This being so the Lieutenant Governor considers that it would be mere waste of time to examine the grounds on which the Karnál revenue rates are based at any great length The produce estimates adopted and the prices used for the valuation of the produce are clearly moderate the revenue rates resulting are pitched slightly lower than those which have now been paid in the tract without hardship for the last 40 years and, as already said the rates have stood the test of a series of bad seasons in a satisfactory manner There would not appear therefore to be any room for doubt regarding the moderation of the revenue demand On the other hand the Lieutenant Governor does not think that the rates can be considered unduly lenient The rise in the selling value of produce being set off against the lowering of the standard of assessment, a due allowance being

afflicted with failure of crops The point which the Lieutenant-Governor desires to impress upon the local officers is that they should observe with vigilance the working of the assessments of the unirrigated lands in all seasons of scanty rainfall It is meant that relief shall be afforded whenever it is required, and the responsibility for bringing material facts to notice rests with the Deputy Commissioner "

10 The actual increase in the fixed land revenue-roll which has resulted from the re-settlement of the tract is, according to the figures of the Settlement Officer, Rs 16,300 The revenue, fixed and fluctuating, which has been collected since the introduction of the new assessment has, however, been considerably less than that realised under the old system, owing to the circumstance that the average receipts on account of the owners rate have been considerably less than the amount anticipated by Mr Ibbetson This result is not altogether to be regretted, as it shows that the villages are willing to increase or decrease their irrigation according to the circumstances of the season, which it was one of the objects of the introduction of the owners rate to allow, and it is probable that when irrigation is commenced from the new Western Jumna Canal, the loss to Government will be gradually made good The incidence of the old and new assessment in the various assessment circles of the tract is given by the Financial Commissioner in paragraph 5 of his review. The cost of the settlement to Government was Rs 2,61,000 This cost is not unusually great compared with that incurred on other recent settlements, but it must be remembered that the charge held by Mr. Ibbetson, if a somewhat difficult one, was an unusually small one There were doubtless many causes which led to the protraction of settlement operations to a period of nearly nine years, over which the Settlement Officer had little or no control, but, after making every allowance for these, the Lieutenant-Governor is forced to the conclusion that the period was somewhat excessively long when compared with that occupied elsewhere The direct recovery of the cost of the settlement can hardly be looked for; but no one can read the history of the past revenue administration of the district without feeling that it was absolutely necessary that a complete re-settlement of the tract should be carried out as has now been done In paragraphs 769—779 Mr Ibbetson has recorded his opinion of the probable working of the new settlement,

and the Lieutenant Governor trusts that with a careful revenue administration the results anticipated by the Settlement Officer will be fully realised

11 The distribution of the new revenue over the various estates of the tract and over the holdings in each estate appears to have been carried out with much care and judgment, and it is stated that many great inequalities of assessment which formerly existed have now been remedied The revenue was distributed by the people over their holdings by an all round rate for the most part and in the present state of the village communities there is no reason to object to this system It seems doubtful, however, to the Lieutenant Governor whether the refusal to allow the benefit of a proportionate reduction of assessment to tenants paying hitherto at the same rates as the owners is justifiable and it will probably be necessary to lay down general lines for the guidance of Settlement Officers on this and other points connected with the fixing of rents at the time of the assessment of the land revenue The dates for the payment of the instalments of the revenue are not stated in the Report apparently, but doubtless they were fixed after careful consideration and will be found appropriate The record of rights is considered by the Financial Commissioner to be unusually reliable and complete and the Lieutenant Governor is therefore pleased to accord his sanction to it The remarks of Mr Ibbetson in paragraph 630 regarding the Village Note Books should be carefully borne in mind by the Deputy Commissioner of the district His Honor trusts that these memoranda have been duly kept up to date since the close of settlement operations

12 The Lieutenant Governor also trusts that every effort has been made and will be made to keep the elaborate and valuable records prepared at the last settlement up to date and to avoid the expenditure and trouble which the late operations have entailed upon the Government and the people The careful training bestowed upon the Patwárís by Mr Ibbetson should now bear fruit in this matter, and the reorganization of the Kánungo agency of the Province will doubtless render the inspection of the work of the subordinate agency thorough and efficient It appears from the Report that there are 116 Patwárís in the tract lately settled, drawing pay according to the grades in which they have been classed, varying from Rs 9 to Rs 14

per mensem The subject of the maintenance of the record of rights up to date should be fully noticed by the Deputy Commissioner and the Commissioner of the Division in the Revenue Administration or Agriculture Report of each year

13 A full and interesting account of the Mandal family and of its peculiar revenue free tenure is given by Mr Ibbetson in paragraphs 139—156 and 515—561 of the Report This account will doubtless be of great assistance to local officers in dealing with any question which may arise regarding the Mandal grant hereafter. A separate communication will be made to the Financial Commissioner respecting one feature of the present system of management by the Mandals which appears to the Lieutenant-Governor to be of great importance It must be distinctly understood that Government has full power to order suspensions or remissions of the revenue of the Mandal estates as of all other estates of which the revenue is assigned in any shape in the Punjab, and this power will be exercised from time to time as occasion may require The Report refers to many individual matters to which the Deputy Commissioner should give his best attention, but which do not call for separate notice in the present review With reference to the remarks contained in paragraph 431, care should be taken that the restrictions placed upon the grant of gun licenses do not result in undue injury to the crops from deer and other wild animals. It may be noticed incidentally with reference to Mr Ibbetson's remarks in paragraph 679 that the recent orders of the Government of India, conveyed in letter No 540 R of the 15th of May 1883 (paragraph 7), contemplate the omission of years of famine prices in calculating the prices current for the valuation of produce.

14 The Report submitted by Mr Ibbetson is one of unusual interest and excellence, and will prove of great value to all officers serving in the south-east districts of the Punjab The chapters on the social customs and habits of the people are particularly full and interesting, and Mr. Ibbetson has successfully attained the object which he set before himself, *viz*, of writing for the east of the Punjab a report which should correspond with Mr. Purser's Report on the Montgomery District in the west At the same time it must be remembered that in reviewing Mr Purser's Report Sir Henry Davies felt constrained to remark that there was danger that

settlement literature compiled on such a scale might be increased to an inconvenient size and Sir Charles Aitchison thinks that there is much in Mr Ibbetson's Report which might more appropriately have found a place elsewhere and not a little that might have been condensed with advantage had Mr Ibbetson possessed more leisure for this task The Financial Commissioner has however, already been separately addressed on this subject, and it is not necessary therefore to add more on the present occasion It is to be regretted that the Report should have been submitted to the Punjab Government after so long a period from the conclusion of settlement operations The great length to which settlement operations were protracted necessarily detracts something from the merits of Mr Ibbetson's work but His Honor is well aware that that work was of a very high character and that it is deserving of the thanks of Government The acknowledgments of the Lieutenant Governor are also due to the Extra Assistant Settlement Officer Munshi Gobind Sahái and Superintendent Munshi Khádim Hussain

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ORDER —Ordered that the above remarks be communicated to the Financial Commissioner of the Punjab for information and guidance, and to Mr Ibbetson for information

Also that they be forwarded to the Government of India in the Department of Revenue and Agriculture with the recommendation that the settlement be confirmed for a period of *thirty years from the kharif harvest of 1879*

No 4? R—71 d ted S ml 8th Apr l 1886

From—C S BAYLEY Esq C Under Secy to the Govt of I d a Rev and Ag l Dept

To—The Secretary to Government Punjab

I AM directed to acknowledge the receipt with Mr Thomson s letter No 56 dated the 5th ultimo of Mr Ibbetson s report on the revised settlement of the southern portion of the Karn il District and of the Resolution recorded upon it by His Honor the Lieutenant Governor

2 The re settlement which was commenced in 1872, extended over a period of nearly nine years during the whole of which it was under the control of Mr Ibbetson who has embodied the results of very careful work in a most excellent and interesting report The increase of land revenue which has been obtained by re assessment is insignificant and wholly insufficient to cover the cost of the operations The Governor General in Council however fully concurs in the opinion expre sed by the Lieutenant Governor that no one can read the history of the past revenue administration of the district without feeling that it was aosolutely necessary that a complete re settlement of the tract should be carried out The investigations incidental to re settlement have more over placed on record numerous facts regarding the condition of the district which will be invaluable for administrative purposes, and which could probably have been ascertained in no other manner The operations appear to have involved little harassment to the people and they have certainly resulted in substantial relief in many cases where it was much needed

3 The circumstances of the tract re settled much resemble those of the Delhi District the report on the re settlement of which has recently been under consideration and the review of that settlement renders it unneces ary for the Government of India to record any lengthy observations on the present occasion The revenue rates imposed by the Settlement Officers have been summarized in paragraph 8 of the Resolution of the Local Government They have been in force for several years and have as observed by Sir Charles Aitchison stood well the severe test of a succession of unfavourable seasons No better proof of their appropri ateness could be afforded and the Governor General in Council has no hesitation in confirming the sanction given by the Lieutenant Governor to the assessment of the tract except five villages which have been settled for five years only for a period of 30 years, with effect from the autumn of 1879

Punjab Government Press Lahore—11 6 88—350

PREFACE

This report should have been written in the cold weather of 1879-80. But just as I was about to begin it, I was put on special duty in connection with the Kaithal Thanesar Settlement, which kept me very fully occupied for several months. The report was ready in the rough by the end of July 1880. But the tables and final figures could not be added till the operations were quite complete, which was not till October of the same year. Moreover the MS. had to be faired, and the copy to be examined by me. Thus when I took charge of the Panjáb Census in August 1880, some three weeks steady work was needed for the final completion of the report. The duties of my new appointment left me no leisure and allowed me no holidays; to have neglected them would have kept a large and expensive establishment idle, while the reviewing officers had already more settlement reports in their hands than they were able to deal with. The printing of the first sixteen chapters of the report was finished by July 1882; but prolonged illness and the task of writing the Census Report have delayed its completion till now.

These circumstances must be my apology for the manifold imperfections of a report hurriedly written and never revised, and for the late date of its submission.

For the length of the report there were several reasons. The tract includes several very distinct parts, each of which had, in some respects, to be treated separately. I was directed to draw special attention to the evils which water-logging had wrought in the canal-irrigated portion. The

system of owners' rates was a new experiment, misconceptions had arisen concerning its nature, difficult questions are likely to arise in connection with it, and it was important to explain very clearly the precise nature of the assessment made

The previous Settlement Reports for the eastern districts of the Panjáb were scanty in the extreme It so happened that I had more opportunity for collecting detailed information regarding the customs and beliefs of the people and the agricultural practice of the tract than was enjoyed by any other of the officers employed in the settlement of those districts It seemed advisable that some one of the reports should contain full information on these points, and I attempted to do in some small degree for the eastern districts what Mr Purser had done for the districts of the great Panjáb *bár* in his classic report on the Montgomery Settlement The customs of the people are not only interesting to the sociologist, they are also valuable to the administrator, for a very small acquaintance with, and interest in them gives him a wonderful power over the people of the country A settlement recurs only at intervals of 30 years, and much of what I have written will not even then need to be re-written, and this is why I have not hesitated to record at some length the information which eight years' intimacy with the people of the tract has enabled me to collect

LAHORE, }
30th March 1883 }

DENZIL IBBETSON

List of Books referred to in the Report

Reference	Name and Edition of Book
A A	*Ay Akb* Pe s an Text by Blochm n C lcutt —As at S iety 1872 77
A C	*A r lt t e f C f e* by Wrglt All h b d Go ernm nt P e 1877
A G	*A t Geo aply of I t a* by Gene al C ngham L lon—T b er 1871
A t	*A tclt o T eat e* V ls II III IV Calc tt 1863 64
A R	*As t R p o t* of K mal and Pánı t P t d nd lated l y P j b G e e t 1878
A S	*A Jæ l g l S rer of I d a* by Ge e l Cunn gl m Vol I nd II S mla Gove m t P r ss 1871
A T	*A le T Up I d* London 1833
B	*P t P t Fl a f I l a* Lond —Alle 1874
B tl	*P P s T l f B ddl t P lg* L d n—T l 1869
Bl	Blochm n *T l t f A y l Akb* f the B g l A t c Soc ty C l tt —I pt t M n I res 1873
B	*B P k T nple of El pl t* B ml y—Th k 1875
C	C ha n *H to y of t e S kh*
E I	*E b I t t t* M ne Lo l n—M y 1875
El	Ell tt (S H M) *H t y f I t* El t l l y D L lon—T b 1867 77
Elpl	Elph t e *H tory of I t* 5th 1t n L d —M r y 1856
F	*F lt h H t ry* T l t l by B ggs L l 18 9
F F	*F l er F le of I t* l y Bea an L l —P e e 1877
G	G th *P pt l f B t l I t a* L nd —H lw k 1864
G D	Gr nt D ff's *H t y of t e M l tt* Londo 18 6
Gl	*Gl y of I t T* by H H W l L d —All & C 1855
H S	*H t S t* l y H H W l C l tt —P h p C ll g P 1846
H T	*H t T t* l y P M Sh no V I I L l n—T l 1872 79
J	Je l s *B d f I d* V l III C l tt —W y n 1864
	D tt *M l f I t* P l —Tl C ll P 186

List of Books—(concld)

Reference	Name and Edition of Book
J A S B	*Journal of the Asiatic Society of Bengal*
Jeh	*Jehángir's Autobiography* Translated by Price London—Murray, 1829
J R A S	*Journal of the Royal Asiatic Society*
K	Keene's *Moghul Empire* London—Allen, 1866
K R	*Karnál Report* (Settlement 1847), by Gubbins, No XXXI, Part ii, Vol II Selections from public correspondence, N W P, Agra, 1852
M	Marshman's *History of India* London—Longmans, 1867
Mac	Macgregor's *History of the Sikhs* London, 1846
Morg	Morgan's *Ancient Society* London—Macmillan, 1877
N N	*Nádir námah* of Mirza Mahomed Mahdi, translated into French by Sir William Jones at request of King of Denmark
Nol	Nolan's *History of the British Empire in India*
N-W P	*Races of N-W P*, by Sir H Elliott and J Beames London—Trubner, 1869
P M	*Panjáb Manufactures*, by Baden Powell Lahore—Panjab Printing Company, 1872
P P	*Panjáb Products*, by Baden Powell Roorkee—Thomason College Press, 1868
P R	*Panjab Rajahs*, by Lepel Griffin Lahore—Panjab Printing Company, 1870
Pr	Price's *Retrospect of Mahomedan History* London—Longmans, 1820
P Rel	*Political Relations* between British Government and Native States in 1840, by D'Cruz Calcutta, 1844
S	Stewart's *Panjab Plants* Lahore Government Press, 1869
S J	Stanislas Julien, *Mémoires sur les contrées occidentales* Paris Imperial Press—1857-58
Sk	*Skinner's Life*, by Fraser London—Smith Elder, 1851
S M	*Siyár ul Mutakharin* Translated by Briggs London—Murray, 1832
St M	Saint Martin's *Géographie, etc du Nord Ouest de l'Inde* Paris Imperial Press, 1859
S T	*Sanscrit Texts*, Muir, 1st edition London—Trubner
T G	Thornton's *Gazetteer of India* London—Allen, 1854
Thos	Thomas' *Pathan Kings of Dehli* London—Trubner, 1871
T W	Talboys Wheeler's *History of India* London, 1867-69
Wil	Wilson's *Ariana Antiqua* London, 1841

TABLE OF CONTENTS

PART I—THE TRACT UNDER SETTLEMENT

Chapter I —INTRODUCTORY AND DESCRIPTIVE

Chapter II —PHYSICAL HISTORY

Ch pter III —POLITICAL HISTORY

Chapt r IV —ADMINISTRATIVE HISTORY

Chapter V.—Revenue History

Chapter VI.—Tribal Organization of the People

Chapter VII.—The Village Community

Ch pte VII —The Village Co mmunity —(*Co ld*)

Chapte VIII —The Social Life of the People

Ch pter IX —The Religions of the People

Chapter IX.—The Religions of the People.—(*Concld.*)

Chapter X.—Agricultural Appliances.

Chapter XI.—Agricultural Operations.

Chapter XII.—Agricultural Staples.

Chapter XII —AGRICULTURAL STAPLES —(Contd.)

Chapter XIII —CATTLE FARMING

Chapter XIV —MANUFACTURES

Chapter XV —TRADE AND COMMUNICATIONS

Ch pter XVI —MISCELLANEOUS

Chapter XVI.—Miscellaneous.—(Concld.)

Part II.—THE SETTLEMENT OF THE TRACT

Chapter XVII.—History of the Settlement

Chapter XVIII.—The Record of Rights

Chapter XIX.—Subsidiary Operations

Chapte XX —The Assessment—General Considerations

Chapt r XXI —The Assessment—Detailed Discussion

Ch pter XXII —The Assess ment—Owner s Rates and Fixed Demands

Chapte XXIII —The Assessment—General Resume

Ch pt r XXIV —Future Working of the Settlement

Chapt XXV —Conclusion

No. MAPS (IN SEPARATE VOLUME.)

SETTLEMENT REPORT

OF THE

KARNAL DISTRICT

Part I —The Tract under Settlement

CHAPTER I —INTRODUCTORY AND DESCRIPTIVE

1 **The Tract under Settlement** —The tract under settlement consists of so much of the present Karnal district as was included in the old district of Panipat. It will be referred to as the Tract in this report. It comprises the whole of tehsil Panipat and the whole of the Karnal pargana of tehsil Karnal except six villages transferred from Muzaffarnagar The total area is 89 square miles of which 406 are cultivated 308 are pasture and 178 are barren Of the cultivation 265 square miles are irrigated from permanent sources of supply 13 more from unbricked wells and 5 more are naturally moist the *remaining 123 square miles are dry The Tract includes two towns* Karnal and Panipat with populations of 23 133 and 25 0[illegible] respectively Its rural population is 26 157 It includes 330 village areas and 536 estates separately assessed to land revenue Its fixed land revenue is Rs 4 36 5[illegible]1 in addition to an estimated owners rates demand of Rs 1 03 830

2 **Figure and Position** —The Tract forms an irregular rhomboid with a length north and south of 40 miles and breadth east and west of from 2[illegible] to 30 miles The old tower of the cantonment church at Karnal in the north east corner of the Tract is in north latitude 29 42 17 and east longitude 76 58 21 The Tract is bounded on the east by the river Jamna on the north and north east by the Indri pargana of tehsil Karnal on the west by tehsil Kaithal and the Jind State and on the south by the districts of Rohtak and Delhi

3 **Geology and Soils** —The whole formation is alluvial the only two stones in the Tract which are not known to have been brought there by human agency being objects of worship and blue

micaceous sand is found everywhere at moderate depths *Kankar* is pretty generally found near the surface, usually in nodules, but occasionally compacted into slab *kankar* The water level is much affected by the canal and the river Near these it is often only two or three feet, and seldom more than 15 feet, from the surface In the arid part of the Tract it is often at a depth of 90 feet or more

4. There is no real clay, the soil varying from stiff loam to pure sand The stiffest loam is found in the hollows and drainage lines, where the action of the water has washed out the sandy particles, it is locally known as *dakar*,* and is differentiated by the clods not crumbling in the hand The sandiest soil is known as *bhúr*, it is found in the riverain tract, chiefly in patches lying in the beds of old river channels, and also occasionally on the watershed, where it would seem to have been collected by the wind It includes all soils that do not form clods under the plough Intermediate soils are classed as *rausli*, and vary in quality between the two extremes

5. **Rainfall.**—The average annual rainfall at Karnal is 28 inches, and at Panipat 23½ inches The rainfall rapidly decreases as we go southwards, and still more rapidly as we go in the direction of the north-west, towards the Kaithal highlands The average Nardak rainfall is certainly not more than 18 inches The Khadir receives the most plentiful and most frequent rainfall, many local showers following the course of the river Statement No V gives the figures for past years

6 **Physical Conformation The Khadir.**—The Tract is divided into two parts by the great backbone of Northern India, which separates the water system of the Indian Ocean from that of the Bay of Bengal This watershed runs north and south at a distance of from six to twelve miles from the river, and is almost imperceptible to the eye It runs close under the city of Karnal, and thence follows the line of the eastern canal distributary marked in map No II, which shows the configuration of the Tract

7 To the east of, and generally within a mile or two of the watershed, lies the bank which marks the western limit of the excursions of the Jamna All to the east of this bank is known as the Khádir, and is a lowlying riverain tract, with light soil and water close to the surface, having 55 of its area cultivated, and 80 per cent of its cultivation irrigated, 67 per cent from permanent and 9 per cent from temporary wells, and 4 per cent from the canal, and being largely in the hands of industrious cultivators It is bounded to the east by the broad sandy bed in which the river runs, and the Jamna has swept over

* Also called *dhaka* (N W P ii, 279) probably because the *dhak* tree is almost confined to the low lying bottoms, in which this soil is found

the whole of it within comparatively recent times The drop at the bank is often ten or twelve feet and the land immediately below the bank is usually somewhat lower than that at the river edge The general slope southwards is about one and a half feet per mile There is little heavy jungle in this part of the Tract but date palms and mango groves abound other trees are scattered about profusely and the *luxuriant cultivation and the frequent wells make the Khadir perhaps* the prettiest part of the district.

8 Physical Conformation The Nardak—All west of the Khadir bank is called the Bángar But it is divided into two parts by a well marked drop which runs from near Karnal in the north east to the south west corner of the Tract and is defined almost exactly by the Hansi road which runs along its crest and the Rohtak branch canal which flows below it which are shown in maps Nos II and XII

9 All the country to the west and north of this drop is a high table land which runs away with ever increasing aridity towards the desert of Hariana locally known as the Bágar The small portion of this area included in tehsil Panipat is traversed by the Butana branch canal and is for convenience sake included in the Bangar proper presently to be described But so much of the table land as lies in tehsil Karnal is a high arid tract with water at great depths having only 27 per cent of its area cultivated and hardly any of it irrigated and being chiefly occupied by cattle grazing Rajputs it is called the Nardak The general slope of this Tract is about two feet in a mile southwards and the same westwards the slope decreasing as you go south The Nardak is conspicuously a grazing country consisting of large open plains covered with various grasses and separated by dense belts of *dhak* and other small trees The large trees are almost entirely of the fig tribe The uniformity of the grassy glades is broken by local hollows *(dábar)* fringed by trees in which water collects and produces a dense growth of coarse water grasses and by cultivation which is confined almost entirely to the drainage lines and other lowlying land The jungle is in places almost impenetrable and in a good season the scenery is exceedingly park like and pretty especially when the *dhák* and *kair* are in flower

10 Physical Conformation The Bangar—The intermediate country below the Nardak drop constitutes the Bángar proper and that name will henceforward be applied to it together with the small area of highland included in tehsil Panipat Almost the whole of this tract is watered by the canal consequently 51 of its area is cultivated chiefly by industrious agricultural castes who irrigate 75 per cent of their cultivation The soil where not rendered barren by salts or swamp is stiff and fertile The general slope is about one and a half feet per mile southwards and one foot per mile west

wards, the slope decreasing as you go south Where the Bangar, Nardak, and Khadir meet near Karnal, the Nardak drop splits up into several steps which lead imperceptibly from the Nardak to the Khadir, so that the Bangar does not really extend north of Karnal There is not much timber in the Bangar Mango groves are not uncommon, but other trees are thinly scattered about As the neighbours say, land is so scarce and valuable that the very ridges between the fields are set up on edge , and the Bangar Tract is for the most part a sheet of cultivation, interspersed with great swamps and large barren plains covered with saline efflorescence

11 **Division of the Tract** —Thus the Tract is physically divided into Khadir, Bangar, and Nardak The boundary between tehsils Karnal and Panipat is purely administrative, and does not correspond with any natural feature, but it obliges us to divide the Tract for settlement purposes into Nardak, Karnal Khadir, Karnal Bangar, Panipat Khadir, and Panipat Bangar Statistics regarding these five divisions will be found in the statements appended to the report, and a more detailed description will be found in the chapter on the assessment in the second part of the report

12. **Streams and Drainage Lines** —The Jamna, which skirts the eastern edge of the Tract, is by no means so capricious in its course as are the Panjab rivers Its bed varies from half a mile to a mile in breadth, of which the cold weather stream only occupies a few hundred yards The banks are for the most part high and well defined, especially in the lower part of the Tract The present tendency of the river is very slightly to the eastwards , and it has, within the last few years, changed its channel just below Karnal, so that six villages formerly lying to the east of it are now included in the Karnal district Its present action is almost wholly for bad Its floods deposit sand for the most part , and the thin skim of loam that sometimes covers it requires a long course of self-sown *jhao* before it is really worth cultivating The Khadir, especially in the northern part, is much cut up by old river channels (*khala*), and when the Jamna is in flood, the water passes down these channels into the lower land and does much harm by flooding the fields The largest of these channels runs almost directly under the Khadir bank, and is known as the Burhi Nadi, or Ganda Nala It receives the drainage of the Bangar east of the watershed, and often swamps the country round

13. In the Bangar the principal drainage is that running under the Nardak drop, and occupied by the main canal, and, in its lower course, by the Rohtak branch Minor local drainages intersect the area between this and the watershed, and empty into this main drainage , but they are very broad and shallow, and are often only perceptible by their effect upon the cultivation

Wild Animals—Mammals

14 In the Nardak there are two main streams the Chautang and the Nai Nadi (or narrow creek) The Chautang cut off a small corner from the north west of the tract and passing on to the south west is taken up by the Hansi Canal which occupies its lower bed all the way to Hansi and Hissar For a considerable part of its upper course the channel is so straight and the banks so clean that it has been thought to have been artificially made and to have formed part of the old Imperial canal system[1]

15 The Nai Nadi is a spill from the Chautang which it leaves above Taraori in pargana Indri and flows in a south westerly direction through the middle of the Nardak joining the Dhanak Canal in the extreme south west corner of the district or rather used to do so until the Hansi Canal was taken across it Both these streams flow only after heavy rain and in both the water bed is immediately to the west of the channel The flood flows ... for cultivation Small local drainage ... catch ... may be traced on map ... by the cultivation which f... their course

16 **Wild Animals—Mammals** —In old times lions and tigers were not uncommon in the tract The Nardak was a favourite spot for the old Emperors to hunt lions in and as lately as 18.. Mr Archer says that lions were once seen within 10 miles of Karnal while tigers were exceedingly numerous in the immediate vicinity one having carried off a *sipahi* at the Imperial Bridge where the Grand Trunk Road crosses the old canal only a few days before his arrival He describes Karnal as situated in a large plain but recently recovered from the tigers[1] and Thornton writing in 1854 says that a few years ago the jungles were infested by lions which are now rarely met with except further to the west and gives several authorities in support of his statement[2] At present leopards are only occasionally found in the *jhao* jungles along the river or in the Nardak scrub Wolves are common all over the tract especially in the Nardak where goats and sheep abound Rewards for their destruction of the average amount of Rs 558 have been paid for the last 10 years rising as high as Rs 1,070 in one year The reward is Rs 5 per head Jackals abound and do an immensity of damage to the crops especially to maize which can hardly be grown in some parts as the jackals don't leave even the bones Wild pigs are common chiefly on the

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hal ... M ... ak ... a ... M ... ll ... atplces ... ly ... tled ... ile ... (A S ii 216) It ... for ... the 53 §16) ... wh ... Ambala (/ Th ... 95

Note see also ... in § 53 ...)

14 See § 53 inf ... T ... 295 N ...

16 A T 129 ff ... T G ... Lang ...

Wild Animals - Birds

river edge and along the Nardak drainages, and they too do great harm to the crops The Indian antelope[3] abounds all over the district, and the ravine deer[4] and *nilgai*[5] are found in the highlands, but are not very common, while the hog deer[6] is not infrequent in the swampy parts and along the river Hares[7] are universally distributed The means adopted to protect the crops from wild animals are detailed under the head of agriculture in § 431 But of all animals, monkeys[8], which swarm all along the canal, are the most destructive, doing almost as much mischief in the houses as in the fields, and there is no way of keeping off these sacred pests

17. Wild Animals—Birds.—The swamps which abound in the canal tract swarm with grey geese,[1] ducks,[2] snipe,[3] and waders of all sorts in the cold season, and the yield of the rice crop is seriously diminished by their ravages *Chirimars* or bird-catchers from the east fix long low nets across the swamps at night, and, frightening the ducks into them, net immense numbers which they sell at Ambala and Simla In very wet years pelicans are not uncommon, and in the cold weather the *sâras* and *kûlan* cranes[4] abound in the cultivated parts Grey partridges[5] and quail[6] are common almost everywhere, and black partridges[7] are found in small numbers wherever there is water The small sand grouse[8] is found on the highland fallows, and peafowl[9] and several sorts of pigeons[10] and plover[11] abound The sport to be obtained in the district is excellent, not that enormous bags can be made, so much as that you can hardly go anywhere without finding game moderately plentiful at your tent door, and often in great variety

18. Wild Animals—Saurians and Reptiles.—Crocodiles, all of the blunt nose or true crocodile genus, abound in the river and along the canal and its attendant swamps They frequently seize and kill young cattle, but I know no really authenticated case of their having attacked a man, though in most villages they tell you that this has actually happened in some other village

The poisonous snakes are the *karait*[1] which is very common, indeed, the cobra (naja tripudians)[2] and the Russell's viper,[3] which are less so, and the echis carinata[4] which is not often seen No rewards are given for the destruction of snakes in this district, but the stud department paid for the destruction of 1,225 snakes in and about the stud land in 1875 and 1876

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16 [3] J 228 [4] J 229 [5] J 226 [6] J 222 [7] J 207 [8] J 7

17 [1] J 945 [2] J 951 2 4 7 8 9, 961 2 3 4 5-7 9 [3] J 871 2 3 [4] J 863, 865 [5] J 822 [6] J 826 9, 830 2 5 [7] J 818 [8] J 802 [9] J 803 [10] J 772, 787, 788 [11] J 840, 851, 859

18 [1] G 343 [2] G 338 [3] G 396 [4] G 397

19 Fish—Fish abound in the Jamna in the swamps along the canal and in most of the village ponds They are caught by *Jhinwars* and by a few Meos and are largely eaten by the Musalmans of the cities and by lower castes in the villages

The principal net used is a circular casting net weighted with iron at the edges and with an iron ring in the middle through which a rope passes This rope is tied to the end of numerous strings which when pulled through the ring draw the edges of the net in towards the centre and thus enclose the fish over which the net has been cast There are three sizes *anti jal batt jál* and *jall* The seine or *maha jal* is used in still water often in connection with stake nets (*patti kunja*) *Ghat* is the name of a large seine used in very deep water In running water a conical bag net (*handal*) with very fine meshes is used for small fry In the village ponds the fish are caught by hand groping or with a conical basket open at both ends (*thapa khauncha*) which is suddenly plunged to the bottom with its big end downwards and any fish that splashes taken out through the small end

20 The following table shows the principal fish used for food There are many other varieties which are either very scarce or not eatable. I have unfortunately not been able to obtain Gunther's catalogue and have only had Beavan's hand book to work with the descriptions in which are exceedingly meagre and I am not always certain about the species Moreover several allied species often go by the same native name in which case I have taken that which appeared to be the most common The letters in the last column of the table have the following meaning —

R Found in the river
J Found in swamps (*jhils*) or ponds
C Common
S More or less scarce

Table of the principal fishes eaten in the Tract

No	Native name	Scientific name	Reference to Beavan Handbook (F F)	Habitat and occurrence
1	Bá s	Rhyn h bdella a l ta	179	J C
2	B chwa	E t p hthy acha	131	I C
3	Bh gan	C oss h l b	70	R S
4	Bh ra	B bu chrys pt rus	57	J C
5	Boal	W ll g tt	128	J C
6	B lál	B la g h	94	R S

Trees and Shrubs

No	Native name	Scientific name	Reference to Day's Hand book (F I)	Habitat and scarceness
7	Chilwa	Chela gora	99	R C
8	Dahi	Rasbora elanga	81	J C
9	Dahwai			
10	Daula	Ophiocephalus gachua	176	J C
11	Durri	Pseudeutropius mitchelli	132	J C
12	Garehi	Ophiocephalus gachua	176	J C
13	Gulabi	Bola goha	94	R S
14	Gunch	Bagarius yarellii	145	R C
15	Hanwari	Mugil corsula	175	R S
16	Hilsa	Engraulis telara	116	R S
17	Kág / Kawwa	Belone cancila	153	J S
18	Kalbáns	Labeo calbasu	62	R J C
19	Khagar	Macrones lamarrii	137	R J C
20	Lonchi	Wallago attu	128	J C
21	Mahasir	Barbus mosal	41	R S
22	Mungri / Mangari	Clarias magur	124	J S
23	Moh	Notopterus kapirat	122	R S
24	Pabta	Callichrous bimaculatus	129	R J C
25	Palwa	,, egertonii (Sp ?)	131	R J C
26	Parna	Wallago attu	128	J C
27	Rehu	Labeo rohita	63	R J C
28	Sáwal bara	Ophiocephalus marulius	177	J C
29	,, chhota	,, striatus	177	J C
30	Singhára	Macrones lamarrii	137	R J C
31	Singi	Saccobranchus fossilis	126	J C
32	Suni	Crossochilus reba	70	R S
33	Thela	Catla buchanani	80	R J C
34	Tingra	Macrones lamarrii	137	R J C
35	Tingra chhota	Macrones tengara	137	R J C
36	Urni	Mugil corsula	175	R S

21 Trees and Shrubs.—The following table includes the commoner of the trees and shrubs, and such herbs as call for notice For the botanical names I have followed Brandis But as synonyms, both botanical and vernacular, are numerous, I give the references opposite each tree to the places where full information will be found I mention below the principal uses to which the villagers of the Tract put each tree, but many other uses are mentioned by the authorities I quote I omit officinal uses, which are simply innumerable

No	Vernacular name	Botanical name	References
1	Ák	Calotropis procera	B 331 S 144
2	Amb	Mangifera Indica	B 125 P P 964, 1187, 1968 S 45
3	Arni	Clerodendron phlomoides	B 363

The Dhak

No	Vern cul n me	B t n l ame	R f ces
4	Bakain	Mel zed rach	B 68 P P 1165 1970 S 53
5	B	F cus bengal nsi	B 41 I P 1466 1930 S 13
6	Dhák	B tea f dosa	B 142 P P 9 8 1709 1587 16 4 1 07 1790 1859 S 59
7	Farásh	Tam r articul ta	B 22 P I 1128 c81 S 92
8	G l r	I ic s gl merata	B 42 P I 1487 19 9 S 212
9	Hi g	B l. t o b rghu	B 59 I I 1840 S 44
10	Hi	C 11 s.p	F 15 S 16
11	Jál	S l d ra l les	B 316 I I 061 S 175
1	J moi	Enge oj e ul t & j mbolan	B 33 f I I 075 S 94
13	Já d	I r s pi sp ge a	B 169 I I 922 1 48 1580 17 3 010 S 74
14	Ja ása	Alhag maur rum	B 144 I I 1 o S 57
15	Jháo	T m d ic	B 21 I I 11 6 11 7 080 S 91
16	Jhá beri	Z yph mm l	L 88 I I 1178 103 S 43
17	K d	D 1) m t	B 96 S 137
18	K	C pparis aphyll	B 14 I I 978 1120 1865 S 15
19	K la (Ch p t)	Sol num nthoc rp m	I I 1373 S 161
20	K nd (K) o S t y	A gem n n e can	I I 1090 S 9
21	Kh j	I hœn sy l est is	B 554 I I 95 1796 1797 1993 S 43 ft
22	Kík	Acac a ar b	B 180 I I 1241 1567 1717 1811 S 5
23	Nagpha	Op ntia d llen	P 45 P I p 194 S 101
24	Nim	M l a In l ca	B 67 P P 1166 1839 S 32
5	Nimbar	A c l phlœa	B 184 I I 1819 S 53
26	Piaz	A pl l l s f tulosu	S 54 I I 15 0
27	P lkl	F irf ct r a	B 414 S 14
28	P p l	F u el g	L 415 I I 1485 S 13
29	Kus	E l p (?)	
30	S tr w l		
31	S onjna	M ri g pt ryg sp m	B 1 9 P P 1173 1584 1643 S 19
32	Shl h m	D lberm o	B 149 P P 1 19 1905 S 65
33	S mbhálu	Vite egu do	B 69 P I 1367 096 S 166
34	Th ha	Euph h yl n nd n f l	B 438 f P P 1473 1597 19 3 S 194 f
35	Tu t	M ru lb	B 407 P I 97 1488 S 17 f

22 The Dhak —The *dhak* is the commonest and one of the most generally useful trees in the Tract It grows gregariously in all low lying stiff soil and drainage lines and covers an area of 47 616 acres in the Tract of which 31,413 are in the Nardak The soft tough wood stands water well and is used for well curbs and the lanthorn wheels of Persian wheels and also for bullock yokes The scoop for lifting water is made of thin slices of it sewn together with leather and similar slices are used for the hoops of sieves and the like Fire

Other Trees

used at religious ceremonies is always made of this wood The leaves are used as plates and drinking cups at big dinners, small purchases from the shop are wrapped up in them, and buffaloes eat them when young The flowers boiled in water yield an inferior dye for clothes, and when dried and powdered form the *keso* or red powder used at the Holi festival Cattle also eat them, and they improve the milk The roots are sometimes dug up, beaten, soaked in water, beaten again, split up, beaten a third time, washed, and the resulting fibre used for the rope of a Persian wheel and other purposes But the rope so obtained is very inferior The resin which exudes from the *dhák* is called kino (vern *kani*) It is collected by a caste called *Heri* who come from the east, and a man following this occupation is called *dhak-pachu* They pay a small sum for liberty to collect the gum and gash (*pachna*) the trees in rows at distances of a span Next day the resin which has exuded is scraped off into a small vessel When dry it is beaten with sticks into small pieces, and winnowed to separate it from the bark and refuse Its properties are elaborately described by Mr Baden-Powell[1] Here it is used chiefly to clear indigo and as a tonic, and never for tanning The gum is collected from the tree when the thickness of a man's thigh, or about four to five years old, and a good tree will yield two seers, and again a smaller quantity six or seven years later, but the yield varies greatly A rainy season favours its production, and the best time of year is the cold weather

23 **Other Trees**—The *kikar* is the next most useful tree It grows gregariously all over the Tract save in the lightest soils It is said to flourish in soil impregnated with sulphates, but plantations of it were tried on the canal in such soil, and failed almost entirely The hard, strong, close wood is used largely for agricultural implements, and especially for all bearings, rollers, linings of presses, ploughshares, and the like, which undergo much wear and tear It makes very fine charcoal The bark is used largely for tanning and to control the fermentation in distilling, and the seed pods are greedily eaten by cattle and goats

24 The *khajúr*, or the wild date palm, is abundant all over the Khadir Its soft stems are hollowed out for water channels The leaves are used for hand fans (*bijna*) and mats They are also stripped of their stems, split up into strips, and beaten with sticks till the fibre is soft, when ropes are made of it, chiefly for the Persian wheel The process, however, is very laborious, and the rope exceedingly inferior The fruit, which is poor, is eaten by the villagers No spirits are distilled from it since the cantonment was moved from Karnal

25 The *farásh* is found only in the Khadir Its wood is used for building purposes, and when young, for charcoal The galls (*main*) are used for dyeing

 [1]P P p 397ff

Shrubs

26 The *pipal* *pilkhan* *gular* and *bar* are solitary figs chiefly valued for their splendid shade. One or other is almost always to be found outside the gate of the village The *gular* wood stands water especially well and is used for well curb as is though less frequently that of the *pipal* The *pipal* leaves too are very fine fodder but are only used in famines as the tree is sacred

27 The *shisham* *tunt* and *nim* are not very common except where sown The former gives the best wood grown in these parts for all purposes which require strength and toughness. The fruit of the *tunt* or wild mulberry is eaten by the children and the twigs are used as withies for basket work of all sorts and for the lining of un bricked wells

28 The *amb* or mango is the favourite tree for groves and every village out of the Nardak and especially in the Khadir has seve ral The fruit is exceedingly poor and not sold as a rule. The leaves are used for charms the wood for bowls for kneading dough and for any purposes in which durability or strength is not required

29 The *jaman* is always used for the outer rows of groves growing straight and tall and close together and shielding the trees inside It must be distinguished from the *jiman* or Eugenia jambos. The wood is used for building purposes and for bedsteads and the fruit which is inferior is eaten by the villagers

30 The *kendu* is common except in the Khadir The wood is very tough and hard and is used for prongs and teeth of agricultural implements

31 The *seonjna* or horse raddish tree yields long green buds which form a favourite pickle and the tree is always ruthlessly lopped as only the young shoots bear fruit.

32 The *bakain* or Persian lilac with its delicious scent is often found by the well Its wood is used for ox yokes

33 At Karnal itself there are I suppose the finest fruit gardens in Northern India dating back from the times of the old cantonment while the mangoes of the canal and other gardens surpass even those of Saharanpur The old canal too has a very fine selection of trees many of them rare on its banks

34 **Shrubs** —The *jal* and *kair* grow gregariously all over the higher and poorer parts of the Tract except in very light soils The fruit of the former is called *pilu* The buds of the latter are called *tint* and are eaten boiled the ripe fruit is known as *pinju* Both fruits ripen in Jet and form a real resource for the poorer classes in famine years The wood of the *kair* is greasy and the churn staff is therefore always made of it

Grasses.

35. The *jháo* grows in the low sandy flats all along the river edge The *simbhálu* is common in all the lighter soils of the Tract Both are used for basket work, and for lining unbricked wells

36 The *jánd* makes good charcoal, and the unripe pods are called *sángar*, and eaten boiled or fried The tree is often sacred to the inferior deities In the Nardak it is partly replaced by the *nimbar*

37. The *jharberi* flourishes everywhere except in the Khadir The ripe fruit is called *ber*, and is eaten in Jet The bushes are cut in Katik and Jet and piled in a heap (*bint*) to dry They are then beaten with sticks, and the broken leaves form *pala*, a very valuable fodder The leafless thorny bushes (*wár* or *chap*) are used for hedges

38 The *híns* and the *híngo* are common, especially the former The cut bushes make splendid hedges, the thorns of the former being especially formidable The latter makes good fuel

39. The *arni* and *satráwal* are chiefly remarkable for the delicious and powerful perfume of their flowers, which scents the air for many yards round The former is used for charcoal, and pipe stems are made of the branches

40 The *thohar* or euphorbia, and the *nágphan* or prickly pear are used for live hedges in the Khadir, where thorny bushes are scarce

41 The *ák* grows everywhere, and is used in curing tobacco Its root is officinal

42. Among herbs, the *piáji* is chiefly remarkable as the mark of bad sandy soil It grows in cultivation only The *jawása*, *rus*, and the two *kandai*, grow among the crops in the light-flooded soil along the river edge, and do them an immensity of harm Their presence is a proof that the soil was too wet at sowing for the yield to be good

43 **Grasses** —The principal jungle grasses of the Tract are given below I omit the many species that grow on fallow only —

No	Vernacular name	Botanical name	References
1	Anjan	Andropogo iwarancusa	S 253 P P 880 1535
2	Baru	Sorghum halepense	P P 880 S 262
3	Dáb	Poa cynosuroides	P P 1540, 1782 S 254 N W P ii, 278
4	Dila	Cyperus tuberosus	P P 880 S 264

Grasses

No	Vernacular n me	Bot nical na e	I f nces.
5	D bh	Cynod n d ctyl n	I P 875 1 83 S 253. N W I u 03
6	Gandhi	An lropogon sp ?	P P 877
7	G thil		
8	K n	Eragrostis p ?	S 255
9	M j	Saccharum m j	I P 17 8, 1802 S 261
10	Muthpura		
11	Palwa	An l opogon annulat m	P I 8 9 S 248
12	P nni	Andr pogo m nc t m	P P 1534 1803 S 248 N W I u 308
13	R		
14	Si w k	Pan cum olo m	P P 837 876 S 58
15	S ral	Heteropog n c t rt m	S 55
16	S kra	Sacch rum pont m	P P 880. S 261

44 The *dib* is the *kusha* or acred grass of the Hindus. It is a coarse grass growing in lowlying moist places and is chiefly used for ropes It is cut in Katik dried beaten oaked in water for a few days in the hot or a month in the cold weather and the fibre washed and dried The process requires little labour and the ropes never rot. They are not strong however They are used for the ropes of the Persian wheel where they will last three months or more for stringing bedstead and for general purposes Buffaloes eat the young grass and the old grass is sometimes used for thatching

45 *Panni* is a very similar grass to the above in habit and ap pearance. It is very abundant and is the principal thatching grass of the country Its roots form the sweet smelling *khas* used for tattis The culm or seed stem is called *beran* or *sink* and is used for making brushes and for religious purposes Buffaloes eat the young grass

46 The *sarkra* or *sarkanda* (tiger grass) is found on the canal and in the Khadir The thick strong culms are called collectively *blnd* and are used for making chairs boxes and screens and the leaves for thatching Baden Powell would seem to have confused this grass with the one next following

47 *Munj* is very like *sarkra* in general habit and appearance but is much thinner in the stem and is found only in the Khadir The top of the culm is called *tilu* the sheathing petiole *munj* and

Grasses

the two together *majori* *Múnj* is used for making string and rope, and is stronger than *dáb* It is also used for matting The *tilu*, which is peculiarly fine, elastic, and polished, is used for making winnowing pans (*chháj*), coverings to protect roof ridges, carts, &c, from the rain (*suki*), clothes boxes, and the like This grass must be distinguished from the hill *múnj* of the Panjab, which is Andropogon involutum, and is here called *bhábar*

48 The following are the best fodder grasses, in order of merit *Dúbh*, *anjan*, *palwa*, *gándhi*, *sarála*, *rus* All these are cut and stacked as hay *Sanwak*, when young, is best of all, but falls off as it gets older Its seed is eaten in fasts The other grasses given in my list are all grazed when young, but are very little used later on The roots of the *díla* or sedge are eaten on fast days

CHAPTER II —PHYSICAL HISTORY

49 Changes in the course of the Jamna —It may not be out of place here to discuss briefly the more recent changes in the course of the Jamna The question whether it ever as thought by some geologists as well as archæologists formed a part of the western water system is too large to trench upon but I may point out that if the Jamna ever did run into the Indian Ocean the two large and very remarkable bight in the Bangar on which the cities of Karnal and Panipat stand and which cut right through and extend to the west of the watershed almost certainly mark two intermediate steps in its change to its present course and that the old course must have run along the foot of the Nardak step where the main canal runs now

50 But changes in this stream have been during historical time confined within the limits of its present Khadir That it did once flow below the towns of Karnal and Panipat in the bed immediately under the Khadir bank now occupied by the Burhi Nadi[1] is beyond a doubt And it is also certain that it did not at once wholly abandon that bed but that a branch of some importance continued to flow in the old channel till comparatively recent times In 1398 A D Taimur encamped on the banks of the river of Panipat on his way from Panipat to the Jamna and the Ayin Akbari written about 1590 A D states that the stream of Sanjnauli (a village in the Khadir) runs under the town of Karnal[1] There is a universal tradition that the Burhi Nadi used to flow regularly in flood times within a comparatively recent period and within the memory of man the floods have passed from the river above Dhansauli and run down the old bed as far as Delhi the last occasion being in 1864 A D

51 But the strongest evidence is afforded by the map which clearly shows that in some parts of its course the river or its branch suddenly changed its cour e while in others it gradually retreated On this part of the Jamna the villages on the river edge divide alluvion thrown up in front of them by straight lines drawn from the end of their old boundaries to meet the main stream The result is that as the general tendency of the stream is to shift eastwards the boundaries of villages which have had a gradually receding river frontage for any considerable period run out to the east in long parallel lines This formation is well marked on the present river frontage and it is impossible to look at a map showing the village

50 See Imp N II Ell 432 495 A A i 520

boundaries of the Karnal, Panipat, Sunpat, and Delhi Khadirs, without being convinced that exactly the same process has taken place in some places and not in others along the course of the Burhi Nadi or Ganda Nala, the dry channel of which still runs under the Khadir bank There are two well-defined blocks of land which are clearly marked off from the rest of the Khadir by the superior stiffness of their soil, and by their sharply-defined river bank They are, the block including Ata, Dahra, Rakasahra, and Ganaur, and that including Barsat, Pundri, Bábail, and Korár Now these two blocks consist of villages with more or less circular boundaries, while the villages to the west of them show marks of alluvial accretion, and there is little doubt that these former villages were at no very distant period on the east bank of the Jamna This conclusion is borne out by local tradition, which tells us that Ganaur and Barsat, with all the villages about them, formerly lay to the east of the river My personal knowledge of the soil of every village in the Khadir, and of the innumerable old channels still to be traced, has convinced me that these two areas have wholly escaped the river action which in comparatively recent times has gone on throughout the remainder of the Khadir, and that here, and here alone, the main river has changed its course suddenly, and not gradually It follows, of course, that the change in that course may have taken place after, and not before, the date of origin of these villages (See further §§ 172 and 178 *infra*)

52 As regards the date of the change, almost the only data we have are the number of generations for which the various Khadir villages are said to have been inhabited The Panipat tradition is that the river left the city walls in the times of Boali Qalandar, or about 1300 A D The villages over which I believe the river to have passed comparatively recently, show from 10 to 15 generations in their geneological trees, those which I believe the river to have gone round, from 20 to 30 Of course, even supposing the geneological tree to be absolutely correct, it by no means follows that all the generations have followed since the foundation of the village, for the community traces back its descent to its common ancestor, and it is always possible, and, in villages settled as offshoots from a neighbouring parent village, almost certain, that the family as it stood at some stage of its descent from him, and not the ancestor alone, emigrated to the new village Much information on the riverain changes of the Panjab is to be extracted from the first 14 pages of Mr Medlicott's sketch of Panjab geology, written for the Provincial Gazetteer

53 **The Chautang and Nai Nadi.**—The existence of numberless abandoned wells throughout the Nardak jungles affords certain proof that the tract was once far less arid than it is now, for extensive irrigation with water at 70 to 90 feet from the surface is impossible, at any rate to Rajputs. The whole countryside say that

the Chautang was dug out and straightened by some former Emperor and used in old days to flow continuously as a canal and that when the stream became intermittent the water level sank and the wells were abandoned The names of the builders of many of the wells are known and it would appear that the change dates from not so very many years back It is noticeable that Nadir Shah in January 1739 crossed a large river at Taraori on the Nai Nadi [1] and the people say that one of the old Emperors built a dam and turned part of the Chautang water into the Nai The whole matter is intimately connected with the interesting question of where Firoz Shah s canal really did run—a question which can be discussed at much greater advantage by the Settlement Officer of Indri and Kaithal than by myself

54 Early History of the Canal—It would appear that the canal was first taken to Hansi by Firoz Shah in 1355 A D and carried on to Hissar next year and that he took *sharb* or 10 per cent on the yield of the irrigation as water rate But it very quickly ceased to run as a canal for Taimur in 1398 must have crossed its channel between Panipat and Kaithal and his very minute itinerary makes no mention of it while Babar 200 years later expressly stated that there were no canals west of the Jamna In Akbar s time Shahabuldin Ahmad Khan Governor of Delhi repaired it In 1648 Shah Jahan again set it in order and carried it on to Delhi for his Lal Qilah *

In 1739 Nadir Shah found it in full flow but it must have ceased to run almost immediately after this in the terrible times that followed his invasion and when we took the country in 1805 it had long silted up almost entirely The subsequent history of the canal will be found at §§ 133 to 136 and 158ff[1]

55 Famines—This will be the most convenient place to give such information as I possess with regard to the earlier famines in these parts

In 1783 A D or 1840 S there was a terrible famine known as the *chálisa* in which grain rose to 4 seers the rupee and the horrors of which have been handed down by tradition to the present generation No efforts were made to relieve the distress and even rich men died in numbers

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53 N N Ch p VI K 16 f N W P 19ff Ell 300 8 11 vi 2 5 26 Not 86 Th 294f B t Th m f e t T m m t k n S e Ell 433 P 50ff K R 37 S l P p t n P j t d C ls th Delhi t rnto y

It i g llys d th t Al M d Kh G m f L ho w s the b ld b t t eems p s bl th m y h be n som co fus S Ell vi 67 S M 417 N N Ch p vi Elph 583

54 R f e es l t p a d Ell 24 301 86 N N Ch p VI

Famines

56 In 1803 A D, or 1860 S, there was a total failure of crops, and great distress, but little mortality

57 In 1812 A D, or 1869 S, grain rose to 10 seers per rupee, but great efforts were made to encourage private enterprise and transport, and the mortality was not great

58. In 1824-25 A D, or 1881 S, there was a terrible famine In the former year the crops withered up, in the latter, none were sown No grass sprang up, the cattle died, agricultural operations were suspended, the people fled, not one-fifth of the revenue was collected, and in many villages none was even demanded The export of grain to the south, where the distress was even more severe than in the Tract itself, helped to raise prices But there would not appear to have been any very great mortality

59 In 1833 A D, or 1890 S, the whole country was overwhelmed by the most terrible famine which village tradition can recall, forming the epoch from which old men fix the dates of events In many villages no land was even ploughed up for the autumn crop, in but few was any seed sown, in none was a crop reaped What little grass sprang up was eaten by locusts The cattle died,* grain rose to 8 seers per rupee, and the people followed their cattle, while crowds of emigrants from the highlands to the west poured into the district to help the residents to starve The spring rains were abundant, and where cultivation was possible, an ample yield combined with famine prices more than covered the money loss of the preceding season, but men and cattle alike were wanting to take full advantage of the opportunity And when the rains of 1834 again failed, the district simply broke down Large remissions and suspensions of demand were made, large balances accrued on the remainder, the jails were once more filled with defaulters, and villages were again deserted in every direction

On this occasion it was proposed to prohibit the export of grain to the west, but Government sternly refused to allow of "any tampering with the grain market, as highly objectionable in principle, and likely to lead to disastrous results"

60 In 1837 A D, or 1894 S, the failure of the rains again caused the greatest distress In the district itself there was nothing more than a severe drought, in itself a sufficiently depressing circumstance But further south the calamity assumed the proportions of a great famine, so that in some places the people were "driven to move bodily

* Mr John Lawrence says —"As early as the end of April there was not a blade of grass to be seen for miles, and the surrounding plains were covered with the carcases of the cattle which had died from starvation On the canal splendid crops were cut down and sold as fodder to those who could afford to pay for them"

Famines

to find food elsewhere and the demand for grain thus created drove up prices in Panipat to famine rates Wheat was again at 8 to 10 seers per rupee

61 In 1841 A D a terrible epidemic of fever ravaged the whole of the Delhi territory the mortality being so great that in many places the crops died for want of persons to look after them while the Government revenue showed a deficit of Rs 37 000 and in 1843 another of a similar character but even more terrible devastated the country In 184[illegible] the rains failed but the calamity assumed the proportions of a drought rather than of a famine

In 1851 a drought began which continued to 185[illegible] almost causing a famine and the effects upon the crops were infinitely disastrous

62 In 1858 A D or 1917 S the rainfall was scanty in 1859 it consisted of only three or four heavy showers in 1860 it was less than 6 inches at Karnal Within two months the price of wheat rose from [illegible]3 to 9 seers per rupee the large export of grain across the Jamna greatly enhancing the demand Relief works were set on foot and from January to September 1861 the weak and sickly were fed at an expense to which the famine fund alone contributed Rs 41 500 In August of the same year [illegible] 37 souls received relief in this manner Cholera broke out in the camps and the mortality was considerable among both men and cattle In the Nardak two thirds of the collections were suspended and between 1860 and 1865 balances of Rs 43 000 accrued of which more than Rs 7 000 had eventually to be remitted

63 In 1869 A D or 1925 S a famine again occurred which was not so general nor in the lower parts of the district so severe as that of 1860 But in the Nardak and the Kaithal tehsil the failure of crops was more complete and the distress greater and the terrible mortality among the cattle left far more lasting effects upon the prosperity of the people In 1868 both crops entirely failed and in 1869 no rain fell till August and the autumn harvest was accordingly scanty while the spring harvest again entirely failed Relief works of a very extensive nature were again opened and alms distributed as before From first to last R 1 71 643 were spent and 1 990 700 souls fed the daily average of helpless persons receiving gratuitous relief in April 186[illegible] being 12 [illegible] in addition to 1 814 on relief works Cattle to the number of 65 000 died and saved the *chamars* and *chuhras* from starvation Of the Nardak in particular the Deputy Commissioner wrote —

Hundreds of people are in a state of semi starvation never getting enough to eat from one day to another Not a leaf is to be seen on the trees that have while they lasted made a wretched substitute for fodder for the cattle Skeletons of cattle in all directions empty huts and lean countenances of the people remaining in villages indicate

Famines

a state of poverty fully justifying the relief proposed" The Government, in its review of the famine, stated that it was more severe in Karnal than in any other district of the Panjab The suspensions for the district, including the high tract of Kaithal, were Rs 46,647, of which Rs 22,193 was Nardak revenue, Rs 19,400 out of a demand of Rs 24,000 being suspended in the Nardak in 1869

Nearly 20,000 cattle died in the Nardak alone, and the people have never recovered from the effect of this terrible blow, directed as it was at their most certain source of sustenance

64 During the progress of settlement operations a drought, in some respects more destructive, because more prolonged, than any of its predecessors, has afflicted the Nardak From 1875 to 1877 the people have not had a single good crop Poor-houses have been opened, and relief works set on foot, but mortality has been small, and in fact famine pitch has hardly been reached But the grass famine has been terribly complete, and the cattle have again suffered so fearfully that I hesitate to estimate the extent of the loss Large remissions and suspensions have again been sanctioned, but the strain on the resources of the people has been very severe

65 It is curious to note the regularity with which drought or famine years recur, as shown in the following series of years —1783, 1803, 1812, 1824, 1833, 1842, 1851, 1859, 1869, 1877

CHAPTER III—POLITICAL HISTORY

66 **General Remarks**—The great plain of which the Tract forms a part lying as it does at the very door of Hindustan has from the time of the Mahabharat to the establishment of English rule been the battle field of India But the portion with which we have to do is so near to the capital of Delhi that whenever and for so long as the empire which centered in that city existed as more than a name the political fortunes of our Tract were practically identical with those of Delhi itself Thus all that I shall attempt here is to relate so much of its political history as is distinct from that of the Imperial city and to notice briefly the historical events which took place within the Tract itself The tribal history of the Tract is given in chapter VI

67 **Early Hindu History**—The Tract is included in the *Bidh marshidesa* or land of divine sages the sacred river Suruswati being at Thanesar only 20 miles north of Karnal and the Drishadwati if that is the Chautang cutting off a corner of the Tract All the north eastern portion comprising most of what I have called the Nardak is included in the *Kurukshetra* or field of the great battle described in the Mahabharat and caused by the refusal of the Kurus to give up the five *pats* of which Panipat was one In fact Nardak is properly but another name for the Kurukshetra and I have wrongfully but con veniently and in accordance with local custom extended the term to a certain conterminous area to which it does not properly apply The word is said to mean ruthless (*nir* without and *daya* pity—Sanskrit) and the story goes that the Kurus and Pandus being relations sought for a place to fight where the inhabitants should be specially hard hearted and chose this spot because there they found a man cutting off his son s head with which to dam his water course But Huen Tsang says that the Nardak was known as the Happy Land when he visited it and this would seem to point to *dukh* or pain as the second factor in the word The limits of the Nardak are elaborately discussed by General Cuning ham[1] The greater part of its area lies in the part of the district shortly to come under settlement and the question will then no doubt be thoroughly examined *

67 [1] A G 329 336 A S 212 23

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68 The southern boundary, so far as it lies within the Tract, is the Nai Nadi, which cuts off the western corner of the pargana, and re-appears in the south-west corner, where, at the village of Sinl, or south-west corner of the Kurukshetra, Tarku Jakhsh is said to be situated,[1] and all that lies beyond this line is included under the general term *arab* or non-Nardak, or is called *dher*, meaning vast The Nardak itself is also called *ran* or battle-field, and the term is locally applied to any barren soil, as they say that such soil marks the spots where the sparks from the weapons of the combatants fell The scenes of many of the incidents narrated in the Mahabharat are still pointed out by the people, and the whole area is full of *thaths* or holy tanks It was at the village of Bastali (*Vias Asthal*) that the sage Vias lived who wrote the Veda that bears his name,[2] and there that the Ganges flowed underground into his well to save him the trouble of going to the river to bathe, bringing with it his *lota* and loin cloth which he had left in the river, to convince him that the water was really Ganges water The well is still there to shame the sceptic It was at Gomdar that Gotam rishi caused the spots in the moon, and gave Indra his 1,000 eyes It was in the Párasir tank at Bahlolpur that the warrior Daryodhan hid, till Krishna's jeers brought him unwillingly out to fight,[3] and this is still the most celebrated of the *thaths* of this part The local legends are far too numerous and lengthy to give here, they have been collected into a little book called Kurukshetra Darpan, compiled in 1854 by Munshi Kali Rai, Extra Assistant Settlement Officer of Thanesar, and printed at the Kohinoor Press, Lahore

69. **Buddhist Period**—The enormous number of Indo-Scythian coins (of a type which has not yet, I believe, been described) which are found at Pohlar on the Suruswati, 10 miles north of Kaithal, would seem to show that these parts were, about the Christian Era, included in the Indo-Scythian Empire,[1] and Safidon, on the border of the Tract, is still pointed out as the site of the great slaughter of snakes (or Scythians with a snake *totem*) mentioned in the Mahabharat [2]

70 About 400 A D the Chinese pilgrim Fa Hian,[1] and again in 635, his successor Huen Tsang traversed the Tract At the time of the latter's visit it was included in the kingdom of Thanesar[2] The curious form in which the legend of the Mahabharat is given by the traveller is most interesting[3] It is not improbable that the Gominda monastery described by him, and identified by General Cunningham with the village of Gunána,[4] is now respresented by the monastery of Sita Mai described in §583, and only four miles from Gunána

68 [1] A S ii, 215 [2] A G 332 [3] T W i, 331 A G 332
69 [1] Wil 353 [2] T W i, 140ff N W P i, 106ff
70 [1] Beal, map [2] A G 328 [3] S J i, 212-14 [4] S J i, 215 A G 345 A S ii, 226

History under the Pathan Dynasty

71 Early Mahomedan Invasions — In 1011 A D Mahmud Ghaznavi sacked Thanesar only 0 miles from Karnal but made peace with the Delhi Rajah and returned without coming further south [1] In 1017 A D he plundered Mathra In 1039 A D his son Sultan Masaud annexed this part of the country leaving a governor at Sunpat to administer it in his name but it was re conquered by the Hindus four years later [3]

In 1191 A D Mahomed bin Sám Ghori was wounded and his army utterly routed by Rai Pitora at Narana seven miles from Karnal and three from Taraori [4] This village is situated in the Nardak on the Nai Nadi and not on the Rákshi as stated by Elliott and Cuningham for that river or at any rate the stream now known by that name joins the Chautang at Ládwa in the tehsil of Thanesar Next year the Sultan returned found Rai Pithora encamped on the same spot defeated and killed him in the battle which ensued and conquered Delhi [5] This battle finally substituted Mahomedan for Hindu rule throughout the Delhi territory Kutbuldin Aibek being left at Delhi as the representative of the Ghori Monarch and being made independent by Ghiasuldin Ghori in 1205 A D under the title of Sultan [6]

72 History under the Pathan Dynasty — On the death of Kutbuldin in 1210 A D his Indian possessions were divided into four provinces Delhi and its environs falling to the share of Sultan Shamsuldin Altamsh [1] The province of Lahore was given to Tajuldin Yeldaz and in 1 15 the two fell out about their common boundary and in a battle again fought at the same village of Naraina Tajuldin was killed

73 In 1390 A D Prince Humayun afterwards Sultan Alauldin Sikandar Shah who was in command of the army of his father Sultan Nasiruldin Mahomed bin Firoz pitched his camp at Panipat and plundered the environs of Delhi which was in the possession of the rebel Abu Bakr Tughlak The latter marched out and defeated him at Pasína a small Khadir village some seven miles south of Panipat built on the deserted site of a very large village which is still said by the people to have been destroyed in a great battle [1] There were 4 000 cavalry engaged on one side alone on this occasion

74 In the early years of Mahmud Shah s reign (1394 to 1396 A D) the pretender Nasiruldin Nasrat Shah held the fiefs (*ikta*) of Sambhal Panipat Jhajjar and Rohtak the Emperor being almost confined to the capital [1] In 1397 Mullu Iqbal Khan one of Mahmud s

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71 Fe 50 3 I t Ell 1 45 55 Ell 44 456 *t q* [4] Fer 106 118 Ell 95 Elph 363 \ S 216 Ell II 297 Ell 300

72 Ell 1 301 323 Ell iv 23

73 Ell 23

74 Ell 31

Invasion of Tamerlane.

Generals, and Governor of the Fort of Siri, drove Nasiruldin by treachery from his head-quarters at Firozabad, and the latter took refuge with Tatar Khan, who had been Prime Minister to Ghiasuldin Tughlak II Iqbal Khan then seized upon Mahmud's person, and practically ruled in his name Meanwhile Tatar Khan had encamped at Panipat, and Iqbal Khan marched against him, whereupon Tatar Khan, leaving his baggage and materials of war at Panipat, reached Delhi by forced marches and laid siege to it Iqbal Khan then invested Panipat and took it in three days, upon hearing which Tatar Khan raised the siege of Delhi and fled to Gujerat[1]

75 Invasion of Tamerlane.—When Taimur Shah invaded India, he marched through the Tract on his way to Delhi His route is very fully described in his autobiography, and also in the *Zafar Namah*,[1] and it is easy to trace it throughout, except between Múnak (Akálgarh) and Kaithal The Settlement Officer of Kaithal will no doubt discuss this part of his journey

From Kaithal he marched through Asandh to Tughlakpur, which was said to be inhabited by fire-worshippers[2] Price identifies this place with Safidon But it is almost certainly Sálwan, the words "the people of this place, who are also called Salun," being probably a misreading for "*which* is also called Sálwan" From Salwan he marched, the front of his army extending for more than 20 miles, to Panipat, which he reached on 3rd December 1798 A D The people had deserted the town in obedience to orders from Delhi, but he found there 10,000 heavy maunds, equal to 160,000 standard maunds of wheat, which he seized Next day he marched six *kos* and encamped on the banks of the river of Panipat, which was on the road This can have been no other than a branch of the Jamna, then flowing under the town in the channel of the *burhi nadi* or old stream He then marched *viâ* Kanhi Gazin to Palla on the Jamna in the Delhi tehsil, while a detachment harried the country round and brought in supplies Seven days later he defeated Sultan Mahmud at Delhi Ferishtah[3] says that Taimur returned by Panipat, but this seems to be a mistake for Bagpat

76 Anarchy previous to the Moghul Dynasty—In the anarchy that followed the departure of the invader, and in the subsequent struggle between the Saiyads and the Lodis, the Tract was entirely separated from Delhi, and belonged, first to the ruler of Samana, and eventually to the Lodi rulers of the Panjab[1]

74 [1] Fer ii, 7 Ell iv, 33, 34

75 [1] Ell iii, 428, *et seq* 492 *et seq* Pr iii, 247 *et seq* Fer i, 489 [2] Ell v, note c, and especially 563, 569 I can hear nothing of the Maghs [3] Fer i, 495

76 [1] Ell iv, 37, v 74 Fer i, 541 Elph 418

First Battle of Panipat

During the reign of Bahlol Lodi his son Prince Nizam Khan afterwards Sikandar Lodi seized Panipat and held it a jagir without permission He made it his head quarters and his force there included 1 500 cavalry[3]

Karnal and Panipat were on the high road from Sarhind and Ferozpur to Delhi and from the time of Taimur to that of Akbar or for 150 years armies were constantly passing through the Tract and battles more or less important being fought in it[4]

77 **First Battle of Panipat**—In 1525 A D Alauldin Alim Khan was sent by Babar with a Moghul army against his nephew Sultan Ibrahim Lodi and was joined at Indri by Mian Suliman a Pirzadah of Panipat with additional forces Being defeated near Delhi he retreated to Panipat where he tricked his friend Sulimán out of three or four lakhs and went on his way[1] He shortly afterwards rejoined Babar and next year the Moghul army marched on Delhi

Leaving Ambala Babar marched *via* Shahabad to the Jamna near Alahar in tehsil Tiplı and thence followed the river bank to Karnal There he heard that Alauldin whom he had sent on towards Delhi had been defeated by Ibrahim and that the latter had advanced to Ganaur Mounting his horse at the Gharaunda Sarai (see § 585 *infra*) Babar led his army to Panipat which he elected for the battle field as the town would cover one of his flanks He arrayed his army about two *kos* to the east of the city with his right flank resting on the walls Ibrahim Lodi took up a position at the same distance to the south west of the city and for a week nothing more than skirmishes occurred At length on 21st April 1526 A D Ibrahim Lodi forces advanced to the attack were utterly routed and were pursued by Babar s army to Delhi while the conqueror remained encamped for a week to the west of Panipat He considered the spot a fortunate one treated the people well and made Sultan Mahomed Anglali who had assisted him with troops Governor of Panipat

78 In this battle Ibrahim Lodi was slain and his tomb lies between the tehsil and the city of Panipat The English Government have erected a plain platform over it with a short Urdu inscription It was one of Sher Shah s dying regrets that he had never fulfilled his intention of erecting a tomb to the fallen monarch[1] In this battle too was killed while fighting in Babar s army Sanghar the founder of the Phulkian family of Patiala and Vikramaditya the last of the Tomara dynasty of Gwalior The battle is fully described in the

76 Ell i 440 I II *f i*

77 Ell v 243 Pr ii 677 *et seq* Fer 43 *et seq* Ell 250 *et seq* 290 26 *et seq* 34

78 Ell 108 A S 389 P 4

Second Battle of Panipat

books quoted, Ferishtah's description differing materially from that of Babar himself After the battle, Babar built a garden with a mosque and tank on the spot, and some years later, when Humayun defeated Salem Shah some four miles north of Panipat, he added a "masonry platform" and called it *Chabútra Fatah Mubárak* These buildings and the garden still exist under the name of Kabul or Qabil Bagh * The building bears an inscription containing the words " Bmai Rabiul Awal 934 Hij "

79. In 1529 the Mandhár Rajputs of the Nardak rebelled under their chief Mohan, and defeated the royal troops Babar then burnt the rebel villages [1] Later on, during the struggle which led to the explusion of Humayun, Fatah Khan Jat, Governor of the Panjab, rebelled and laid the country waste as far south as Panipat [2]

80. Second Battle of Panipat —When Humayun died at Delhi the young Akbar, who was then in the Panjab, marched at once under the guardianship of Bahram Shah to meet the Afghan army under the great Hindu general Himu who was advancing from Delhi Passing through Thanesar, he arrayed his army 10 miles north of Karnal, and then marched to Panipat, two *kos* to the west of which City Himu was encamped After a week's skirmishing, Akbar sent a detachment round the city to take Himu in the rear, and advanced to the attack The result was the death of Himu and the total rout of the Afghans Next day Akbar marched to Delhi, which he entered without opposition The battle took place on 20th November 1555 (5th November 1556?), and is fully described by the Emperor Jehangir, and by Ferishtah [1]

81. Moghul Dynasty —During the early years of the Moghul dynasty† the empire was so firmly established at Delhi that the Tract can hardly be said to have possessed a separate history In 1573 Ibrahim Husen Mirzah, Governor of Baroda, rebelled and plundered Panipat, Karnal, and the surrounding country [1] And again in 1606, Prince Khusru revolted and passed up this way from Delhi, plundering and

* Some say that Babar said the spot was " *Qábil Bágh*," fit for a garden, others, that he planned the garden on the pattern customary in Kabul Babar had a wife called Kabuli Begum, and Sir E Colebrooke says her name may possibly be derived from the name of a species of myrobalan (J R A S viii 279 § 400 *infra*)

79 [1] Ell v, 40 [2] Ell iv, 398

80 [1] Jeh No 101 Fer ii, 150, 187 80 Ell v, 62, *et seq* 252 53

† It is generally said that this dynasty, really Turks, were called Moghuls, because to the Indian every foreigner was a Moghul, just as every Indian is still a Moor to the British private It is a curious fact that native officials are commonly called Turks by the villagers of these parts If my Munshis, perhaps all Hindu, are in the village rest house, one villager will tell another—" *Turk log chopál men baithe hue hain* " " There are Turks in the rest-house "

81 [1] Ell v, 355

pillaging as he went When he reached Panipat he was joined by Abdul Rahim and Dilawar Ali Khan who was at Panipat with an imperial force retreated before them to Lahore. Jahangir himself shortly followed in pursuit and moralised upon the success which Panipat had always brought to his family He then ordered the Friday devotion to be always held in the mosque of Kabul Bagh which Babar had built and this custom was continued till the Mahrattas occupied the mosque in the last battle of Panipat

82 Territorial Divisions—In the Ayin Akbari we have the first record of the administrative divisions of the Tract[1] From very early times Panipat formed a separate fief or ikta which probably included the Karnal pargana and in fact Karnal is never mentioned in the early histories and apparently was a place of little importance till towards the close of the Pathan dynasty

In Akbar's time the whole Tract was included in Subah Delhi and the greater part of it in Sarkar Delhi of the seven Dasturs comprised in which Dastur Panipat was one with 10 parganas as follows —Panipat Karnal Safidon Kutana Chhaprauli Tanda Bhawan Ganaur Jhinjhana Kandla and Gangir Khera. But the Dastur of Gohana in Sarkar Hissar may have included and pargana Sunpat in Dastur Delhi pargana Thanesar in the Dastur of that name and in Sarkar Sarhind and the Dastur of Indri in Sarkar Saharanpur almost certainly did include some part of the Tract.[3]

83 In the fourth year of Farrukhsiar that monarch is said to have separated the pargana about Simbhalka from Panipat as a royal demesne for his own private expense [1] It was not then known as Simbhalka and when we took the country that name was only applied to a few villages held by a jagirdar living at Simbhalka But there *was* a large pargana of Jaurasi in which Simbhalka was included and which was also the head quarters of a *thappa* and as this Jaurasi is divided into Jaurasi sarfkhas and Jaurasi khalsa and as the Panipat pargana is said to have consisted of 16½ thappas it is almost certain that what Farrukhsir did was to separate one *chaurási*[2] for his
many other
purposes were
between 1750
and 1806 at any rate show only the two original parganas of Karnal and Panipat (see further §§ 113 to 115) Map No VII shows the parganas as they stood in 1750 A D It includes the whole of pargana Panipat but pargana Karnal stretched to Taraori and included many villages lying to the north of and not now included in the Tract

81 Ell 295 96
82 I ll 82ff 201ff Ell 31 A A i 368ff
83 N W I i 126 N W P ii 54

Nadir Shah—Battle of Karnal

84 Decay of Moghul Dynasty—Towards the end of the 17th century the Delhi Empire was fast falling to decay, and the Sikhs rising to power In 1709 Banda, some time the chosen disciple of Guru Govind Bairagi, raised his standard in these parts, and collecting an army of Sikhs occupied the whole of the country west of the Jamna He laid the whole neighbourhood waste, and especially the neighbourhood of Karnal, where he killed the faujdar and massacred the inhabitants He was defeated by Bahadur Shah near Panipat in 1710, but escaped to found Gurdaspur [1]

In 1729 a charge on parganah Karnal of five lakhs of *dam* was granted to Dilawar Ali Khan Aurangabadi, whose ancestors had formerly held the pargana in jagir [2]

85 Invasion of Nadir Shah and Battle of Karnal—In 1738 Nadir Shah, enraged at not being recognised by the Delhi court, invaded India On 8th January 1739 he reached Sarhind, where he learned that Mahomed Shah with an enormous army occupied a strongly fortified camp at Karnal Nadir Shah marched on to Taraori, on which, it being a fortified town, he had to turn his guns before it would open its gates to him Here he learned from some prisoners he had made that the approach to Karnal from the direction of Taraori was through dense jungle, and exceedingly difficult, and that Mahomed Shah had no room to move in, being encamped in a small plain which was hardly sufficient for his camp, and surrounded on three sides by thick woods He accordingly resolved to take the enemy in flank from the south-east On the 15th January he left Taraori, and marching round by the banks of the Jamna to the back of the city, advanced to a position close to the Delhi camp, meanwhile he sent Prince Nasr Ulla Mirzah with a considerable force to a spot north of the canal and close to Karnal All this time Mahomed Shah was not even aware that Nadir Shah was in the neighbourhood Just at this time a detachment which had been sent to oppose Saadat Khan the Viceroy of Oudh who was marching from Panipat with reinforcements, and missing the enemy had followed him up to Karnal, came to close quarters with him Nadir Shah and Prince Nasr Ulla at once marched to the support of their detachment, which was the first intimation the Imperial army had of their presence The engagement which followed was not decisive But the army of Mahomed Shah, which had already been encamped for three months at Karnal and had suffered greatly from want of supplies, was now cut off from the open country in the rear, and food became so scarce that a seer of flour could not be bought for four rupees Thus Mahomed Shah was starved into submission, and on the 13th of February

84 [1] Cun 84 Ell vii, 413 ff, 423 ff, 456 ff [2] J A S B xlvii, 306

yielded to the invader who led him in his train to Delhi[1] The operations are very minutely described in the Nadir Namah of which I have been unable to obtain the text Sir William Jones in his French translation speaks much of Darian Hamun close to Karnal and between it and the Jamna I fancy the words may be *darya hamin* and refer to the canal which had already been described as a large river

86 In 1748 Ahmad Shah was met at Panipat by the royal paraphernalia and the news of the death of Mahomed Shah and there and then formally assumed the royal titles[1] In 1756 the Wazir Ghaziuddin brought Alamgir II a virtual prisoner to Panipat and thus caused a mutiny in the army the Wazir being dragged through the streets of the city A horrible massacre followed the outbreak

87 **Third Battle of Panipat** —From this time to the establishment of English rule a time of horror followed which is still vividly remembered by the people and was fittingly ushered in by the greatest of all the battles of Panipat In the rainy season of 1760 Sedasheo the Mahratta Bhao marched upon Kunjpura an Afghan town close to Karnal which was then strongly fortified and at which 20000 Afghan troops were then encamped He put the whole of them to the sword and pillaged the country round Ahmad Shah who was in the Doab was unable to cross the Jamna in time to prevent this disaster but at length he forded the river near Bagpat and advanced against the enemy who encamped at the time at the village of Jaina Kalán where the battle of 1390 A D had been fought retreated to Panipat There the Mahrattas strongly fortified themselves and the line of their entrenchments can still be traced on the plain between Kisilu and Panipat The Duranis encamped close in front of them on the plains north of Risalu and Ujáon and for five months the two armies numbering more than 400000 souls remained engaged in fruitless negociation and constant skirmishes The accounts of the horrors of that time given by the people are very striking The whole country round was devastated by the opposing hordes and the inhabitants fled in omuch that the people say that besides the town only the three villages of Phurlak Dahr and Bala were inhabited at the time of the actual battle The Durani army had free access to their camp on all sides while they gradually confined the Mahrattas more and more to their entrenchments The latter had long ago consumed all the provisions obtainable at Panipat at length supplies wholly failed and on the 6th January 1761 the Bhao advanced to action The battle is fully

85 N N Ch p S M i 417f Ell 6off 73ff 8off T G 6 Karn l

86 Ell iii Ell v 238 Elph 738f

described by several authors[1] The Mahrattas were utterly routed and many of them were driven into the town of Panipat, whence next morning the conqueror brought them out, distributed the women and children, and massacred the men in cold blood The fugitives were followed all over the country, and killed wherever they were overtaken It is said that 200,000 Mahrattas were slain in this battle The people still point out the spot where the Bhao stood to watch the fight, marked by an old mango tree which has only lately disappeared They say that the Mahratta General of artillery, one Bahramghori, had been insulted by the young Bhao, and in revenge put no balls in his guns, otherwise the Giljas, as they call the Ghilzai followers of Ahmad Shah, would certainly have been beaten , and that the Mahratta fugitives were so utterly demoralised that the Jat women beat them with baskets, made them get off their horses, and plundered them royally

88 **The Sikh Rule** —No sooner had the Mahrattas temporarily disappeared than the Sikhs appeared on the scene of action In 1763 they defeated Zin Khan, the Durani Governor of Sarhind, and took possession of the whole of Sarhind as far south as Panipat " Tradition still describes how the Sikhs dispersed as soon as the battle was won , and how, riding night and day, each horseman hurled his belt, his scabbard, his articles of dress, his accoutrements, till he was almost naked, into successive villages to mark them as his[1] " Raja Gopal Singh on this occasion seized Jind, Safidon, Panipat, and Karnal, though he was not yet strong enough to hold them , but *in 1772 he was confirmed in his* possessions up to within a few miles north of Panipat and west of Karnal, as a tributary of the Delhi Emperor At the same time Raja Gurdit Singh seized Ládwa and Shámgarh up to within a few miles north of Karnal[2]

89 Recalled by these events, Ahmad Shah once more appeared for the last time in Hindustan in 1767, and, conquering the Sikhs in several battles, marched as far as Panipat , but as soon as he disappeared the Sikhs again resumed their hold of the country[1] In 1774 Rahimdad Khan, Governor of Hansi, attacked Jind , but was defeated with heavy loss, while Gajpat Singh again seized Karnal In 1777 Najaf Khan, the Imperial Wazir, marched in person to restore his authority The Sikhs invited the aid of Zabita Khan, a Rohilla Chief, who had rebelled , and, joining their force with him, encountered the Imperial army at Panipat, and fought a battle said to have been only less terrible than that of 1761 No marked advantage remained

87 [1] G D ii 143 156 Sk 1, 8 17 Elph 747, *et seq* Ell viii, 148ff, 17, of 278ff, 398ff

88 [1] Cun 102 [2] P R 91, 312

89 [1] K 83

The Sikh Rule

with either side and by a treaty then concluded between the Rajas and the Emperor the Sikhs relinquished their conquests in Karnal and its neighbourhood excepting seven villages which Gajpat Singh was allowed to keep and which probably included Shera Májra Játán Dharmgarh Bál Jatan and Bala now under settlement.

90 But the treaty was not observed and in 1779 a last attempt was made by the Delhi court to recover its lost territory In November of that year Prince Farkhundah Bakht and Nawab Majidul daulah marched out at the head of a large army 20 000 strong and met some of the minor Sikhs at Karnal He made terms with these chieftains who were jealous of the growing power of Patiala and the combined forces marched upon that state While negotiations were in progress reinforcements advanced from Lahore the Karnal contingent deserted bribery was resorted to and the Imperialists retired precipitately to Panipat.[1] About this time Dharm Rao held the greater part of the Tract on the part of the Mahrattas and was temporarily on good terms with the petty Sikh chiefs north of Karnal In 1785 he marched at the invitation of the Phulkian chiefs against Kaithal and Ambala and after some successes and after exacting the stipulated tribute withdrew to his head quarters at Karnal In 1786 Raja Gajpat Singh[3] of Jind died and was succeeded by his son Rajah Bhag Singh[4] In 1787 Begam Samru was operating against the Sikhs at Panipat when recalled to the capital by Ghulam Qadir's attack upon Delhi In 1788 Amba Rao united with Zabita Khan s son to make an incursion and was again joined by minor Sikhs at Karnal and levied a contribution on Kaithal[5]

91 In 1789 Scindia having killed Ghulam Qadir and reinstated Shah Alam marched from Delhi to Thanesar and thence to Patiala restored order more or less in the country west of the Jamna and brought the Patiala Diwan back with him as far as Karnal as a hostage[1] In 1794 a large Mahratta force under Anta Rao crossed the Jamna Jind and Kaithal tended their homage but the Patiala troops surprised the army in a night attack and Anta Rao retired to Karnal[2] In 1795 the Mahrattas once again marched north and defeating Raja Bhág Singh at Karnal finally wrested that city from him and made it over to Geo Thomas who took part in the fight[3] He had however obtained the jagir of Jhajjar and making himself master of Hissar harried the neighbouring Sikh territories meanwhile Raja Gurdit Singh of Ladwa obtained possession of Karnal[4] In 1798 Begam Samru was stationed with her forces at Panipat to protect

89 P R 42 45 K 117

90 Cu 115 16 P R 50 53 K 119 20 P R 59 *et seq* K 153 Sk 286 P R 319 [5] P R 63

91 P P 69 *et seq* P R 75 77 P R 320 Cu 122 P R 91

the western frontier during the struggle with Jaipur[5] In 1799 Scindia sent General Perron, to whom the parganah of Panipat had been granted, to bring the Sikhs to order He recruited at Karnal, where the Nawab of Kunjpura joined him , but matters were settled amicably, and the army returned *viâ* Panipat, where they were joined by Begam Samru, and took advantage of the opportunity to chastise Naultha and other large villages for not having paid their revenue to Perron's Collector[6] In 1801 Thomas made a foray through Karnal and Panipat, and then retreated to Hansi The Sikhs asked the Mahrattas for help against him , and Scindia, on the Sikhs promising to become his subsidiaries and pay him five lakhs of rupees, sent General Perron against him In the battle that followed Thomas lost all his conquests, retired to British territory, and shortly afterwards died Safidon and Dhátrat were then made over again to Jind by the Mahrattas[7]

92. The Conquest of the Tract by the English – On the 11th September 1803, Lord Lake defeated the Mahrattas at the battle of Delhi , and on the 30th December, Daulat Rao Scindia, by the Treaty of Sirji Anjangam, ceded his territories in the north of India to the allies , while the Partition Treaty of Poona, dated five months later, gave the provinces about Delhi, from that time known as the conquered provinces, to the English[1]

Immediately after the battle of Delhi Begam Samru made her submission to General Lake ,[2] and the Rajahs of Jind and Kaithal were hardly less prompt Their advances were favourably received , and in January 1805 they joined their forces with ours The other Sikh chiefs, including Ladwa and Thanesar, had actually fought against us at Delhi, and for a whole year they constantly displayed active hostility, till they were finally routed by Colonel Burn at the end of 1804 In March 1805, an amnesty was proclaimed to all the Sikhs on condition of peaceable behaviour , but Raja Gurdit Singh of Ladwa was expressly excluded from this amnesty, and in April of the same year the English forces marched upon his fort of Karnal and captured it[3] *

93 State of the Country in 1805 – So ended that terrible time called by the people *Singashahi ka Rám Raula* or *Bhágardi*,

91 [5] Sk 286 [6] Sk 1, 169 [7] P R 85ff 185 Sk 214ff
92 [1] Ait iii, 76 , iv 221 [2] Sk 292f [3] P R 91, 320ff

* According to the schedule attached to the Treaty of Sirji Anjangam, the tract under the Mahrattas was held as follows – Karnal, annual value Rs 14,000, by Seth Singh Sikh Barsat, Faridpur, Rs 35,000, by General Perron Panipat, Rs 99 478, by Babaji Scindia Ganaur, Rs 6,932, Sunpat, Rs 39,348, and Gohana, Rs 1,16,329, by Colonel John and Geo Hessing The whole list is extraordinarily incorrect (Ait ii, 228ff)

State of the Country in 1805

the Sikh hurly burly or the Mahratta anarchy Its horrors still live vividly in the memory of the villagers The Sikhs never really established their grasp over the country south of Panipat and they held what they did possess only as feudatories of the Mahrattas[1] But the whole period was a constant contest between the two powers and the Tract formed a sort of no man's land between their territories and coveted by both and protected by neither was practically the prey of the strongest and most audacious freebooter of the day whether hailing for the Panjab or the Deccan for nobody cared to spare for to morrow what he might only possess for to day Even as early as 1760 Nadir Shah had to approach Delhi by way of the Doab as owing to the constant passage to and fro of the Mahratta troops the Tract was so desolated that supplies were unprocurable and 40 years later when we took over the district it was estimated that more than four fifths was overrun by forest and its inhabitants either removed or exterminated The arrangement of the villages in groups of small hamlets sprung from and still holding sub feudal relations with the large parent village made the concentration of the population in a few strongholds natural and easy and out of 1 villages in pargana Karnal the inhabitants of 178 had been wholly driven from their homes and fields The royal canal had long dried up and thick forest had taken the place of cultivation and afforded shelter to thieves vagabonds and beasts of prey In 18 7 Mr Archer remarked that only a very few years had elapsed since this part of the country was inhabited wholly by wild beasts[2] Deserted sites all along the old main road still tell how even the strongest villagers had to abandon the spot where their father had lived for centuries and make to themselves new homes on sites less patent to the eyes of marauding bands Every village was protected by brick forts and surrounded by a deep ditch and a wall of some sort every group of villages was at deadly enmity with its neighbours and there are several instances where two contiguous villages in memory of a blood feud dating from the Mahratta times refuse to this day to drink each other's water though otherwise on friendly terms In 18 0 the Civil Commissioner reported and the Governor General endorsed his conclusion that the native administration took no concern in criminal justice or police any further than as its interference in those respects might be made subservient to its immediate pecuniary gains and that the village communities while they held the property of their own society sacred habitually committed depredations and aggressions on other villages or on travellers *and generally shared the plunder they obtained with the ruling power or principal local authority* Revenue administration there was none the cultivator followed the plough with a sword in his hand the Col

93 P P 117 31 f FII v 270 A T 1 129 ff

lector came at the head of a regiment , and if he fared well, another soon followed him to pick up the crumbs*

94 **Early English Policy**—Meanwhile Lord Wellesley had returned to England, and Lord Cornwallis had been sent out expressly to reverse his policy The leading feature of the new programme was the withdrawal from all the recently-acquired territory west of the Jamna[1] And as that territory had to be disposed of, it was natural that the petty chieftains who had done us service in the late struggle, even if only by abstaining from or relinquishing opposition to us, should be rewarded The whole Tract was therefore parcelled out between them and others In the words of General Sir David Ochterlony who superintended the whole arrangements—" In the acts of that day I see many of most lavish and impolitic profusion , but not one in which I can recognise true British liberality and generosity The fact is notorious that the policy of those times considered the most of our acquisitions beyond the Jamna as incumbrances , and the Governor-General's Agent's only embarrassment was, how to dispose of what Government had declared they could not or would not keep, in the manner least likely to be ultimately injurious to our vital interests With this object in view, he formed a belt of jagirdars round our ultra-Jamna possessions from Karnal to Agra "

95 Map No VIII gives some idea of the distribution made I have left those villages blank regarding which I have no information , but it is probable that they too were made over to one or other of our friends The sovereign powers of the Rajas of Jind, Kaithal, Ladwa, Thanesar, and Shámgarh, and of the Nawab of Kunjpura, were confirmed , and they were continued in the lands held by them under treaty from the Mahrattas, except that Ladwa was deprived of Karnal as already mentioned The situation of those possessions, so far as they march with the Tract, is shown in the map by coloured lines Besides this Jind was granted pargana Gohana, and the five villages of Shera and Májrajatan, Báljatan, Bala, and Dharmgarh or Murána , and he and the Raja of Kaithal had the pargana of Barsat-Faridpur, made over to them jointly[1] The villages of Uncha Siwána, Rampura, Ránwar, Kambohpura, Kailás with Mangalpur and Pipalwali, were made over to the Nawab of Kunjpura[2] The Mandals, who held large jagirs in Muzaffarnagar, were induced to exchange them for so much of pargana Karnal as was left un-

* The state of the neighbouring tract of Kaithal, so late as 1843, is vividly described by Major Lawrence (Thanesar Settlement Report, pages 2,4,5) also see a very spirited account by Mr Raikes at chap XXVIII of "The Englishman in India "

94 [1] M ii, 179ff 185ff

95 [1] P R 185, 320ff, 341 Ait ii, 273, 276f [2] P R 147

allotted Begim Samru received considerable grants including some villages of the Tract in addition to her original fief of Sardhána and considerable grants were made to people who had done good service and notably to Mirza Ashraf Beg and Mir Rustam Ali In 1809 the Jind Raja endeavoured to obtain from Government his old pargana of Karnal but the former pargana had already been allotted and the endeavour was unsuccessful[3]

96 Final Assumption of Sovereignty by the English — The policy which bade us abstain from interference west of the Jamna did not long stand the test of actual practice In 1806 Ranjit Singh *crossed the Satlej with his army and marched to Thanesar and it soon became apparent that either he or we must be master in the Tract* The events and negotiations that followed how the Sikh army marched about within 20 miles of our lines at Karnal and how we were compelled to insist upon Ranjit Singh's withdrawal beyond the Satlej are told in most interesting detail by Mr Lepel Griffin[1] The treaty of Lahore dated 25th April 1809 and the proclamation of the 3rd of May following finally included the country to the west of the Jamna in our Indian Empire and with this event ended the political history proper of the Tract The times are still fresh in the memories of the people and the names of Lord Lake and Sir David Ochterlony (*Vulgic* Lony Ochter) still familiar to their tongues

97 Subsequent Events —It will be useful to note the dates of a few events subsequent to the treaty of 1809 About 1810 the jagir grants which had been made in 1805 6 distinguished in map No VIII from the sovereign possessions of local chiefs by the absence of a coloured border were declared grants for life only and were taken under our police supervision[1] They were gradually resumed on the death of the holders Bhai Lal Singh died in 1816 and Raja Bhág Singh in 1819 and these two with the Mandals held the greater portion of the Tract Pargana Karnal was continued to the Mandals in perpetuity on a fixed quit rent in 1806 In 1834 part of Jind and in 1843 the whole of Kaithal lapsed to us on the failure of the reigning line In the latter year parts of Safidon and Asandh were acquired from Jind by exchange In 1845 we confiscated the Ladwa estates bordering on the Tract as a punishment for treason in the Sikh war[3] And in the same year we deprived Thanesar Kunjpura and Shamgarh of sovereign power and reduced them to the position of simple *jagirdars* the powers of Jind however being left intact.[4] In 1850 the whole of Thanesar lapsed on the death of the widow of Fatah Singh the last chief of Thanesar[5]

95 P R 332ff

96 P R 98 131 Ait ii 28ff 237 273 286

97 P R 342 P R 363ff 384 P P 91 211 285 Cu 307 A t 273 281 P R 319

The Mutiny

The present state of things is shown in map No IX Jind is still an independent chief, but the Nawab of Kunjpura, the Sardar of Shamgarh, and the Mandals of Karnal, are simple *jágírdárs*, and exercise no sort of authority as of right within their domains

98 The Mutiny—When the Mutiny broke out in 1857, Mr Macwhirter, the Magistrate of Panipat, was at Delhi, and was killed there Mr Richardes, the Uncovenanted Deputy Collector, immediately took over charge, and though every other European fled and the fugitives from Delhi warned him that the rebel cavalry were following on their steps, and though "burning and pillage reached to his very doors," he bravely stayed at his post, kept more or less order in the district, was active in collecting supplies for the troops passing through and for the army besieging Delhi, and succeeded in collecting more than seven lakhs of revenue, which he sent to the army For these services he was appointed Deputy Commissioner of the 1st Class Directly the news of the outbreak reached Jind, the Raja collected his troops and proceeded by forced marches to Karnal, which he reached on the 18th of May He restored order in the town and its vicinity, marched down the grand trunk road in advance of the British columns, turned his forces on Panipat, recovered Simbhálka which had been seized by the rebels, and kept the road open between Karnal and Delhi [1]

The Maharajah of Patiala was no less prompt He held Karnal, Thanesar, and Ambala in our behalf, and kept the road open from Karnal to Philaur [2] The Chauháns of the Nardak behaved well They raised a regiment of cavalry, and they also supplied a body of 250 chaukidars for the protection of the city and civil lines where our ordnance magazine was established The Mandal Nawab of Karnal, Ahmad Ali Khan, from the very first placed himself and his resources unreservedly at our disposal For these services his quit-rent of Rs 5,000 a year was released to him and his heirs male in perpetuity, and he was presented with a *khillat* of Rs 10,000 in open *darbár* [3]

99. As was to be expected at such a time, the more turbulent spirits among the people took advantage of the temporary suspension of authority to give trouble both to Government and to their neighbours Sixteen of the largest Jat villages in the Naultha *zail* refused to pay their revenue, drove out the Government village watchmen, joined in the disturbances in the Rohtak district, went to Delhi whence they returned after an absence of 22 days, and threatened to attack the Collector's camp Nineteen other large villages, mostly in the Bhálsi and Korána *zails*, rioted, burnt some Government buildings, committed various robberies and murders, and refused to pay revenue The Gujars were, of course, not behind hand, and plundered generally

98 [1] P R 390ff [2] P R 235 [3] Government of India, No 1341 of 24th May 1858

about the country All these villages were fined and punished in various ways and lambardars allowances to the amount of Rs , 317 representing a revenue of Rs 1 46 340 were confiscated

100 In the city of Panipat open sedition was preached especially in the shrine of Boali Qalandar and an attack upon the Collector s camp was only prevented by some Jind troops hurrying up and turning their guns on the town Hostages were seized some few men hanged and the pension of the shrine reduced from Rs 1 950 to Rs 1 000 a year The tehsildar of Gharaunda a Panipat man had to be removed for disaffection The further Nardak positively refused to pay their revenue and a detachment with some guns under Captain Macneile marched against them They first attacked Bala a large and always troublesome Jat village and signal chastisement was inflicted in a fight in which scarcely a village in the higher Nardak but had one or two killed or wounded The Bala people presently somewhat redeemed their fault by giving material assistance in coercing their neighbour Munak The skirmish had a very good effect upon the country side and when Captain Macneile marched upon Julmana it submitted at once while the Asandh people ran away into the jungles and their village was bombarded Heavy fines were realised from the recusant villages The lambardars of Garhi Chhája paid their revenue into the tehsil without its being demanded and were rewarded by a personal grant which the survivor Ji Ram still enjoys Sardara a Jat of Palri aided some European fugitives from Delhi and received a revenue free grant of land in perpetuity And Qalandar Ali Khan of Panipat gave material assistance and was rewarded by a pension

101 On the whole the district suffered very little The Government treasury and records escaped unharmed and of a total land revenue demand of Rs 4 70 38 for 1857 58 only Rs 9,464 was not collected while the canal irrigation for the autumn crops of 1857 was only 3 per cent less than the corresponding irrigation of 1856 In 1858 the numerous village forts which had been built in the times of the Sikhs were dismantled

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CHAPTER IV—ADMINISTRATIVE HISTORY

102 Administrative Machinery.—The provinces acquired by the Treaty of Surji Anjengam were known as the conquered provinces, and with the ceded provinces formed a sub-division of the Bengal Presidency, to which the Bengal Regulations were extended by Regulation VIII of 1805 But §4 of that Regulation expressly excluded from the operation of the Regulations, past and future, the tract afterwards known as the Delhi territory, which roughly coincided with the present districts of Gurgaon, Delhi, Rohtak, Sirsa, and Hissar, and the tract now under report, and, in fact, consisted of the territory transferred from the North-West Provinces to the Panjab in 1858

103. The Delhi territory thus constituted was at first placed under a Resident at Delhi, aided by assistants who had no formally defined charges But as a fact Mr William Fraser, one of the Assistants, exercised almost absolute authority in these parts, checked only by an unexercised right of appeal to the Resident A British Amil of the name of Rai Sada Sukh was appointed at Karnal

104. In 1819 the territory was divided into northern, southern, and central divisions, of which the northern consisted of Karnal, Panipat, Ganaur, Guhana, Rohtak, Sunpat, and Mandauti, and was placed in charge of a Principal Assistant At the same time a Civil Commissioner was appointed at Delhi, who exercised civil, criminal, and revenue functions in subordination to the Resident

105 In 1820 the Civil Commissioner was abolished, and a Deputy Superintendent appointed in his place, who enjoyed no independent authority, but vicariously exercised the power of the Resident, as his Assistant, and in his courts In 1822 the Bengal Presidency was divided, the ceded and conquered provinces forming the western provinces, and a Board of Commissioners of Revenue and Circuit was appointed for these provinces, with its head-quarters at Delhi The Resident lost his Deputy Superintendent, but became the Chief Commissioner on the Board, and continued to exercise independent political functions as Agent to the Governor-General

106 In 1824 the divisions of the Delhi territory were split up into the districts of Panipat, Rohtak, Hansi, Riwari, and Delhi The Panipat district included Karnal, Panipat, and Sunpat, and the remainder of the northern division went to Rohtak In the same year

the Delhi territory was removed from the control of the Board of Revenue collectively and placed immediately under the Resident and Chief Commissioner who however continued to avail himself of the services of the Board in the transaction of all revenue business

107 In 18 9 Divisional Commissioners of Revenue and Circuit were appointed throughout the Presidency and the Delhi Commissioner transacted all business in subordination to the Resident

108 In 183- the office of Resident and Chief Commissioner was abolished a Political Agent to the Governor General taking his place and Regulation V of 1832 annexed the Delhi territory to the jurisdiction of the Sudder Board and Courts of Justice at Allahabad directed that officials should conform to the spirit of the Regulations in the transaction of business and empowered the Supreme Government to extend any part of the Regulations to that territory I have not been able to discover that any Regulations were ever so formally extended but from this date they were practically in force throughout the territory From that date too the Principal Assistant changed his title to that of Magistrate and Collector

109 In 1835 the Agra Sub division of the presidency was erected into a Lieutenant Governorship under the name of the North Western Provinces

110 In 1841 the Rohtak district was broken up and pargana Gohana added to Panipat but the alteration was shortly afterwards cancelled and in 1857 just before the Mutiny tehsil Sunpat was transferred to Dehli

111 In 1858 the Delhi territory lying on the right bank of the Jamna was transferred from the North Western Provinces to the Panjab by Government of India Order No 9 of 9th February and Act XXXVIII of 1858 repealed Regulation V of 1832 quoted above

112 I append a list of the officers who have held immediate charge of this district omitting temporary appointments —

——	W ll m F
18 9	T T Metcalf
1822	H gh F r
1824	G g C mpbell
1824	H H Th m
1825	H gh F
1830	Ale nd F r
1832	S m F r
1834	J h L w e
1836	Ale d F
1840	J hn Paton G bb s
1841	T Wo d ock
1842	J h L w e
1843	J hn P t G bb
845	Ch l G bb n
1848	N th el P wett
1854	C R L dsay
1856	J P M wh te
1857	C B R h d
1858	R P J k s
1859	C P Ell t
1861	M j W P Ell t
1863	M j B k
1865	C pt P
1870	R W Th m
1873	C pt Ha o t
1874	Col I B bb g
1875	C l el H w
1876	C l l Mill
1878	A H B t

Administrative Sub-Divisions

Many of these names are household words with the villagers, and are quoted daily in the course of business The following is a glossary which will be found useful —*Fridan* is Fraser, *Bara Fridan Sáhib* is William Fraser *Hú Sáhib* is Hugh Fraser *Alak Jalandar Sáhib* is Alexander Fraser, but is also used for Alexander Skinner *Ján Pátan Sáhib* is John Paton Gubbins *Chális Sáhib* is Charles Gubbins *Jirás Sáhib* is George Ross, who settled the Mandal pargana in 1852-56

113. Administrative Sub-Divisions —I have found it impossible to give a map which should show all the old parganas as they stood in 1806 As already noted in § 83, every few villages that were held in separate *jágír* were often called a pargana, though the individual villages might be miles apart, and the same village was often quoted quite indifferently as being in one or other of two different parganas In fact, there were two concurrent systems of parganas, one based upon locality, and the other upon the assignment of the land revenue

In 1806 pargana Karnal included 218 villages, and extended to Taraori Of these, 14 belonged to the Taraori Sardar, 25 had long been held by Kunjpura, and 5 by Jind Of the remaining 174 villages, we gave 7 to the Kunjpura Nawab for life, and 158 to the Mandals Of these 158 villages many were mere hamlets, only 63 being separately assessed to Government revenue, and only 93 separate villages are now recognised These constituted pargana Karnal from 1806 to 1807 The remaining 9 villages, known as the nine *mazrahs* of Karnal, were wrongfully held by the Sikhs, they were resumed in 1816, and though lying to the north of Karnal, were included in the Panipat pargana till 1851

114 In the remainder of the Tract the old division into parganas Panipat, Sunpat, and Ganaur, was still followed in the kanungo's records, and map No VII shows the limits of the parganas as they stood from 1750 to 1806 The Jind villages were added to Panipat in 1816, the Sunpat villages in 1822, and the Ganaur villages in 1836 The Bangar villages were generally known as pargana Panipat, and the Khadir villages indifferently as pargana Barsat or Chaunsat up to 1830, from which date the two divisions were known as Panipat Bangar and Panipat Khadir Besides these, we find in the earlier papers mention of parganas Jaurási, Simbhálka, Faridpur, and Bala, which were included in the above, and the limits of which I cannot fix The boundary between the Khadir and Bangar parganas corresponded so nearly with that between my present assessment circles of the same names, that it is not worth while showing it separately

115. There was originally only one tehsil at Panipat, but in 1823, by which date the greater part of the jagir land had been re-

sumed a separate tehsil was formed at Barsat for the Khadir villages the Mandal Tract being excluded altogether There was also a tehsil of Ganaur and one of Sunpat In 1829 the Khadir tehsil was transferred from Barsat to Panipat the two being distinguished as Panipat Bangar and Khadir In 1835 36 the boundary between Sunpat and Panipat took its present shape when Ganaur was absorbed into Sunpat Khadir In 1851 after the settlement of the Mandal villages the Tract was divided as at present into Karnal and Panipat with tehsils at Panipat and Gharaunda and Amritpur and Kairwáli were received from the Thanesar district in exchange for the nine *mahals* of Karnal which had been transferred to it In 1854 the head quarters of the district were moved to Karnal in 1862 tehsil Kaithal and pargana Indri were added to the district and in 1868 the tehsil was moved from Gharaunda to Karnal

116 Early Administration —The early administration of the Tract before the introduction of the regulation law presents so many curious points of contrast with that of our own day that I shall be excused if I attempt a brief sketch of its most salient features more especially as in this district alone has the Mutiny left untouched the records which describe it

The cantonment of Karnal which was not moved to Ambala till 1842 43 was for a long time with the exception of a small military out post at Ludhiana our frontier station Its size may be judged of from the fact that the *monthly* pay of the troops amounted in 1835 to a lakh and a quarter of rupees This pay was by no means always forthcoming the Collector often had to borrow at exorbitant rates from the local money lenders in order to meet urgent demands for arrears of several months standing and as late as 1840 we find the bills dishonoured for want of funds and troops actually marching on service with some months pay owing to them

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within a mile of the cantonment boundaries Forays and affrays and wholesale raids in which cattle were carried off by fifties and hundreds at once were of constant occurrence The Sikh chiefs exercising sovereign powers had exclusive jurisdiction over their own subjects even for offences committed in British territory until in 1833 this state of things grew so intolerable that we assumed criminal and police jurisdiction in Ladwa and Shamgarh The jagirdars whose villages were thickly sprinkled over the Tract gave almost as much trouble as our Sikh neighbours resisting by force of arms the execution of writs and harassing the authorities in every possible way The Mandals were more than once threatened with expulsion from Karnal if they did not become more amenable to authority and their

jagir was actually attached in 1830 on account of their contumacious conduct The whole of the Nardak, and, till the re-opening of the canal extended cultivation, the whole of the Bangar right up to the main road from Delhi, was covered with thick dhak jungle which harboured bands of robbers, and criminals always found a ready refuge with our Sikh friends, from under whose wings they had to be reclaimed through the Resident at Delhi and the Superintendent of Sikh Affairs at Ludhiana, till the appointment of vakils in 1824 simplified the procedure The Rajputs of the Nardak were notorious for their turbulence Session cases were tried at Delhi, and the bodies of criminals executed were left hanging on the gibbets till 1833, when the practice was discontinued Flogging was abolished in 1825 The track law was rigorously enforced, the village to which the thieves were traced, or even that in which the robbery took place if connivance was suspected, being made responsible for the full value of the stolen property, and though this practice was discontinued on the introduction of the Regulations in 1832, yet the Court of Directors expressly ordered its revival on the ground of the number of feudatory chiefs whose territories bordered on the Tract The police establishment was notoriously corrupt In 1820 there were only 3,082 prisoners tried in the whole Delhi territory, of which number 2,302 were acquitted or discharged During the five years from 1828 to 1832 the average number of cases brought into court, excluding assaults, was only 628 for the whole Panipat district In 1879 the corresponding number for a very little larger population was 1,750 The police duties in large towns were discharged by watchmen, while in villages the people themselves were responsible for them, and for the jagir holdings the police were furnished by the jagirdars themselves There were no head-quarters to the district till 1827, and the Magistrate was always moving about and carrying his jail with him, the prisoners sleeping in the open under nothing but a guard The roads were said to be impassable "for man or horse" in the rains generally, and near the canal or river at all seasons, while at the best of times reports took four days to traverse the greatest length of the district There was no road cess, and such repairs as were made were done by prisoners The road cess was not imposed till 1842, and the Grand Trunk Road was not made till 1847

118. Civil Administration.—Civil suits were tried solely by the Sudder Ameen at Panipat, who, after eight years of service, was discovered to refuse on principle to admit the evidence of a Hindu against a Mahomedan, though he admitted that of the latter against the former, and who justified his practice by reference to the Mahomedan law, by which he considered himself bound The language of the courts was Persian up till 1836, no suits against Government were admitted in the courts of the Delhi territory, and no stamps were taken on petitions till, in 1830, Regulation X of 1829 was extend-

ed to these courts by proclamation Sale of land was not permitted without the consent of the whole village save with the express sanction of the Governor General in Council

Government coins were not currrent in the district the copper coins being received with reluctance while the reason given for moving the tehsil from Barsat to Panipat in 1829 was that the larger towns afforded greater facilities to the people for exchanging the current coins in which they were paid for their crops for the Government rupees in which alone the revenue could be paid In 1833 the Government in order to afford revenue payers relief from the arbitrary exactions to which they were subject at the hands of money changers in paying revenue fixed rates of discount at which the ten sorts of country rupees then current would be received in payment of revenue in the conviction that the measure would greatly benefit the agricultural classes Education had steadily deteriorated since the introduction of our rule and in 18 6 of the 12 schools nominally existing in the whole district those of Karnal Gharaunda Dhansauli and Naultha were the only ones attended by *more than two or three children These were all supported by private* enterprise and were all bad alike There were no dispensaries in the district till 1843 when it was proposed to establish them on account of the terrible epidemic

110 Custom and Excise—Every petty chief in the neighbourhood levied innumerable transit dues on the traffic through his territory This pernicious system was adopted by us also even to the extent of allowing every little jagirdar to levy these dues in his own villages The customs line established under the regulations on the left bank of the Jamna lay wholly to the east of the territory and the result was that a vast multitude of custom house officers were scattered broadcast over the country making collections in every town and apparently in every considerable village on almost every article of traffic Payment of these dues did not exempt the goods from duty at the regular customs line so that goods passing across the Jamna into the regulation provinces had to pay double duty In 1823 the whole customs machinery west of the Jamna was abolished and posts were retained only at the ferries which were about three miles apart At the same time the dues were assimilated to those leviable under Regulation IX of 1810 and one payment freed goods for all British territory But this change involved the relinquishment of the customs revenue upon the whole of the trade between Rajputana and the Sikh territory—a revenue which averaged some five lakhs annually Accordingly in 18 8 a second customs line was established on the Western Jamna Canal But the posts on both lines were in charge of mohurrirs on Rs 7 a month and the amount of embezzlement was inconceivably great Smuggling too was practised to

Custom and Excise

such an extent that in 1833 it was estimated that not one-sixth of the salt passing through the district had paid duty In 1834 the "irritating and exasperating interference with trade" practised by the customs officials was seriously commented upon, and all petty traffic was wholly exempted And when the neighbouring Sikh territory became ours in 1843, the customs line was finally removed from the vicinity of Karnal Such chiefs, however, as remained independent, continued to levy their own dues until we deprived them of their powers after the Sikh war, when the Nawab of Kunjpura was compensated for the loss of his customs revenue [1]

Besides Imperial customs, octroi was levied in Karnal and Panipat at *ad valorem* rates varying from 5 to 10 per cent upon all grains, pulse, sugar, oil, oilseeds, ghi, tobacco, firewood, charcoal, salt, and spices passing within three miles of the town, and these dues formed a part of the Imperial revenue till 1823, when grain of all sorts was exempted, and the revenue was devoted to local improvements under the management of a municipal committee The annual net revenue thus realised in Panipat averaged some Rs 3,000 The present octroi revenue of that town is about Rs 20,000 A further tax of 6 per cent on the value of all houses or land sold or mortgaged within the walls of Panipat and Karnal was levied till 1823, when this, and a host of other arbitrary exactions of which I can find no detail, were finally abolished

119 [1] Ait ii, 281

CHAPTER V—REVENUE HISTORY

120 Early Revenue Administration—As soon as the establishment of British rule guaranteed the preservation of general order the Tract settled down as if by magic the people who had taken shelter in the larger villages returned to their fields and hamlets and those who had left the district altogether gradually came back again But the habits which nearly a century of anarchy and confusion had engendered were not at once to be eradicated and the oppressive manner in which we at first conducted our revenue administration greatly delayed the process For the first few years revenue matters were practically in the hands of the people to whom we had assigned the various parts of the Tract But in 1817 we began to assess summarily the annual revenue to be paid by each village not only in estates which had lapsed by the death of the assignees but also at the request of existing assignees in many estates still held by them and by 1824 this process was tolerably complete for the non Mandal portion of the Tract

121 First Summary Assessments—These summary assessments were throughout incredibly oppressive The assessment was based on the principle that Government was entitled by the custom of the *pargana* to half the *gross* produce of the cultivation and a set of cash rates on the various crops which had sprung into existence under the Sikhs and which had apparently been applied to a larger *bigha* than that used by us were levied on areas taken from the kanungo s records (afterwards found to offer no sort of approximation to the real areas) or roughly measured at the expense of the village The rates as applied were Rs 16 per acre for sugarcane Rs 9 3 for wheat cotton and rice Rs 6 14 for barley and Rs 3 7 for other crops These rates however were only used in well developed estates Where pasturage bore a large proportion to cultivation a rate of Rs 3 per acre was imposed on the *whole culturable area* so as to induce the people to extend their cultivation Besides this a new tax on cattle was introduced at the rate of Rs 2 per buffalo and Re 1 per head of other cattle the incidence of which was estimated at As 10 6 per cultivated acre The general incidence of the demands thus fixed averaged Rs 5 to Rs 5 8 per acre cultivated in 1828 when the first accurate survey was made

122 Balances—Mr George Campbell reported that in many cases it would require *the whole gross produce* of the land and cattle to defray the Government demand And in fact the assessments were purely nominal as they were never collected— in some instances not

Early Settlements

half of them—even in the first year of settlement" What could be got from the people was taken, and the remainder accumulated as balances These were constantly added to the demand, so that year by year it increased in arithmetical progression, and if a good season rendered possible a surplus over the actual demand of the year, it was at once seized on account of the balances of less favourable seasons

123. As early as 1822, before the settlement was even completed, there were balances of a lakh and a half in tahsil Panipat alone, and the Board pointed out that "the inhabitants of some villages, nearly in mass, had abandoned their lands and homes, and migrated to distant parts" They therefore authorised the Collector to cancel the leases and induce the absconders to return by promising an assessment based on average crops at market rates, the limit being half the gross produce, plus 20 per cent of "the moiety of the produce remaining to the people" in liquidation of arrears, those arrears having arisen upon an assessment which was admitted to have been so high as to be "merely nominal" In one case the balances of absconders were realized by a tax upon the cattle of the remaining villagers, on the ground that "the increase of pasturage due to the abandoned fields must have benefited them much" In 1825 the Commissioner wrote —"At a very early period after the conclusion of last settlement, the error in the assessments was discovered, large balances occurred annually, till eventually *the whole of Panipat Khadir* was taken under direct management, and the impoverished people, without the means to pay half or even a third of their original assessment, were once more content to remain on their soil" In 1836, four and a half lakhs of balances, dating from as far back as 1814, were still outstanding

124. Early Settlements—The system of settlement was no less oppressive than that of assessment Large portions of villages were made over to neighbouring communities to hold and cultivate, and some of them so hold and cultivate them to this day The village headmen, who were inordinately numerous, were spoken of and treated as the proprietors, the other members of the community as "*raiyats*" The settlement was made with the headmen alone, and no record existed of rights which had become a burden rather than a source of profit There were no village accounts, no village accountants, and the collection of the revenue from individual cultivators was entirely unchecked so long as the amount was forthcoming When a settlement was made, the headmen were imprisoned till they agreed to the terms offered (in one case for ten, in another for seven months), and, having accepted them, till they furnished security for payment One village refused to agree to the assessment, no farmer could be found, and the Commissioner directed the assistant to "confine the people and their cattle to their houses and the immediate site of the village, and sequestrate all land, orchards, wells, &c, and enough of cattle and goods

Mode of Collection

to cover the balances. Farms were only not common because no farmers were forthcoming and village after village was held in direct management. In 18 4 the Assistant writes — With whatever means a farmer may have commenced his agricultural career he has generally contrived to visit the jail four or five times and to attain an unenviable state of ruin in the course of three or four years.

125 Mode of Collection — The mode of collection was as vexatious and extortionate as the assessment was oppressive. The collections were made in February and September long before the harvest and the cultivator was thus forced to part with his grain at a ruinous sacrifice. Guards were appointed to watch the crops in the interest of Government but at the cost of the owner and directly the revenue was overdue horse and foot were quartered in the village at its own expense. One hundred and thirty six horsemen were retained for the collection of the revenue while 2_ sufficed for the police duties of the same tract. The Board of Revenue writes —

A pernicious practice prevails of overwhelming the villages with swarms of hired servants furnished with orders of demand for the instalments of the land revenue without any regard to the means of the people the state of the crops the powers of the village or the number of hired servants so employed. In this way native officers provide for hungry dependants and men of every bad description idle lazy loiterers are scattered over the land and find employment in forbearing to realize the monies they are sent to collect.

In 18_? the fees of these gentry were reported by the Collector to have amounted to more than a lakh of rupees of which the revenue sheriff admitted having received Rs 600 *per mensem*. In 18 6 after two consecutive years of famine a small village had all its crops seized all its headmen thrown into prison and one hundred and twenty head of cattle sold for arrears of an assessment which had never been realized from it in *any one* year which was two and three quarter times its *prese*
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on account of the number of revenue defaulters in custody

126 The following extract from a report of 18_4 alludes to Kutel one of our largest and finest villages — This village is or rather was in the equal possession of Rors and Pathans. In 18 3 the Collector visited it and his displeasure being excited against the Pathans he passed a formal order for their expulsion which was seconded by the Rors knocking down the houses of the Moslem inhabitants. The Rors then undertook the payment of the whole demand but they were unequal to the task a balance of Rs 1 800 remained due and the

Rors were imprisoned till they furnished security They then returned to their village, sold their flocks and herds, paid the balance, and fled They have since returned, and by pacifying the Pathans, have induced a few of them to reside again in the village "

In 1826 the Collector reported as follows —" The tehsildar has urged the people to the extremity of their means, and they are consequently exhausted by a continuance of extraordinary struggles, grievously impoverished, and tremblingly apprehensive of a repetition of the grinding system In many instances, and often in the largest villages, the whole village has fled in a body , for after the usual process of imprisonment and sale of property, desertion remained the common ultimatum "

127. Corruption in the Tehsils —As the Collector reported, " everything was done by the *personal* exertions of the tehsildar " Yet in the tehsils honesty would have been miraculous In 1822 the tehsildars were paid only Rs 20 a month In 1835 one tehsildar was officially stated to have been " the principal cause of the ruin of many villages in Panipat Khadir " Till 1836 one tehsildar, collecting 2½ lakhs annually, enjoyed a monthly salary of Rs 50 , another collected Rs 68,000 on a pay of Rs 30 , a third, Rs 1,37,000 on a salary of Rs 20 , none received more than Rs 100 Between 1821 and 1825 five tehsildars were suspended for fraud , within *four months* of 1835, three were criminally convicted and dismissed, and a fourth committed to the Court of Circuit A common practice was, for the headmen to apply for a suspension of demand, and for the tehsildar to support the application Sanction being obtained, the full amount was collected from the village, and the tehsildars and the headmen divided the difference When the Collector visited the village and found that its condition did not justify a remission, he ordered the amount suspended to be realized, and the wretched proprietors had to pay twice over

128 Effect upon the People.—Under such circumstances the villagers became vagrant on the face of the earth If neither of two villages could pay its revenue, the combined capacities of both might meet the demand on one of them The revenue reports are *full* of such remarks as this —" This village is entirely abandoned , half the villagers have run away , only five families left in this village " The protected Sikh states approached to within a mile of Karnal, and encircled the district on the north and west , petty jagirs lay thick among the Government villages, both offered a hearty welcome, land in plenty to cultivate, and lighter terms than our own to people driven from their homes by the burden of our rule Desertion was so constant that the Collector in one case represented the uselessness of measuring the lands of a village eighteen months before assessing it, as " a year makes a great difference in the condition of a village , so prone are the

Gradual Amelioration

people to go from one village to another and even the *mis* are described as at time prepared to remove their plough and cattle to the waste lands of a neighbouring village

129 The most stringent measure were adopted to check this evil As late a 1037 if the people deserted their holdings they were proclaim d and if they did not return within *one month* all their right lapsed to Government who forthwith bestowed them on another Meanwhile the village who harboured the defaulters and allowed them to cultivate its lands was subject to fine and imprisonment The village of Bham wal a essed at Rs 1 148 was sold for a balance of Rs 88 and bought by Colonel Skinner for Rs 146 5 6 In one case efforts were made to hold a semi independent chief liable for the arrears of defaulter who had fled to his protection The correspondence of the day i full of the contumacy of the people and the decided measure necessary to crush this sort of rebellion The contumacy consisted in omitting to pay a demand which absorbed 60 per cent of the whole yield of their herds and here the rebellion in leaving through fear of a prison the homestead which i dearer perhap to the Indian villager than to any other man on God earth

130 **Gradual Amelioration** —It is needless to describe at any length the step by which a more reasonable system was arrived at Details will be found in my Revenue Rate Report for the tehsil of Ianipat The famine of 18 4 first forced upon the authoritie a revision of the a e ment which was made under Regulation VII of 18_ The demand still averaged R 3 8 to R 4 3 on cultivation in small weakly estates and R 6 to Rs 5 3 on the *hol cultu able ar a* in fully peopled villages But a great advance had been made The revenue survey made in 18 8 by giving firm ground to work upon had rendered impossible those gross inequalities of assessments which had till then been unavoidable The half share principle too was abandoned the demand being estimated to ab orb about a fourth of the gro s produce and the revenue was collected after instead of before harvest More attention was paid to the rights of individuals field to field records were prepared showing the proprietary and cultivating tenures each owner and each occupancy tenant received a slip stating the amount he was liable for and patwaris of a sort were appointed yet surplus land which a village could not cultivate was still largely settled with the neighbouring villages and estates were farmed even when the owners agreed to the assessment if poor and broken up or when flourishing if the farmer would give 10 per cent more than they offered In fact the system pursued throughout was that having estimated the assessment as a guide the Collector put up the estate to be bid for allowing the owners a margin of 10 per cent in their favour Direct management was still frequently resorted to many villages were still partly broken up or deserted by their inhabitants

the balances of twenty years still hung suspended over the people but the general state of affairs was greatly improved and in [illegible] the Collector could report that "for the last four years the revenue has been collected with more reasonable regularity"

131 After the famine of 1833 the assessments were considerably reduced It was found that cultivation had "very generally decreased" since the survey of 1828 The rates were still very high A rate of Rs 2-6-5 per *culturable* acre was taken as [illegible] to be worked up to with "a considerable sum added for cattle in [illegible] peopled villages, and the average on cultivation was Rs 3-2 to Rs 3-12, while the rate in some cases reached Rs 6 or even Rs [illegible] an acre

132 A still greater boon was the remission of the outstanding balances, which was effected in 1836-39 Between that time and the regular settlement of 1842 the assessments of individual villages were, in the Khadir at least, continuously being reduced but no complete revision of settlement was attempted In January 1839 for the first time since the conquest of the Tract, no one was in prison on account of revenue balances, and imprisonment on this score may be said to have ceased as a common practice from that date At any rate we hear no more of it

133 Early History of the Canal, and its effect upon the Bangar —The Bangar villages, being for the most part larger and more populous than those of the Khadir, had suffered somewhat less from raids in the days preceding our rule, but, on the other hand, the greater labour which a stiffer soil entailed upon the cultivator, and the uncertainty of the yield in a tract almost entirely dependent upon rain, made the return of the inhabitants to a village which they had once deserted less easy The irrigation from the Royal Canal had, till the failing of the *Mughal* power threw the country into confusion, been very extensive, and then no doubt as now, wells were but little used where canal water could be got, while the troubles which closed the canal were not favourable to the laying out of capital in sinking new ones The Tract was therefore more than ordinarily dependent upon rainfall—a fact which kept down the cultivation to a far smaller proportion of the culturable area than in the Khadir Thus while, on the one hand, demands based on cultivated or culturable areas pressed far more heavily than where abundant water was easily procurable, on the other hand, when security to life and property were once assured, the existence of an unlimited area of soil as fertile as any already under the plough gave, with the rapid increase of cultivation, an elasticity under inordinate assessment which was wanting in the more fully developed riverain tract, and the gradual extension of canal irrigation so aided this increase, that from the time when the canal was restored by our Government, its history may almost be said to be the history of the Bangar

Early History of the Canal and its effect upon the Bangar

134 The figures below show the irrigation from the *whole* of the Western Jamna Canal from 1819 to 1840 no separate figures being available for the Tract The Delhi branch was opened in 18 0 but the small supply of water carried by it may be estimated from the fact that till 18 6 *at least* no bridges were needed as a loaded village cart could be driven through it without inconvenience In 18 6 the Rohtak branch was opened as far as Gohana but the irrigation from both these canals though steadily increasing up to 1833 was still very limited and in 1831 the small use made of the water was attributed to the uncertainty of the supply the insufficiency of the outlets permitted for each village and the high rates charged *i* As 11 2 per acre

Early Irrigation from Western Jamna Canal

Year	Amount of water rate in rupees	Area calculated at average rate of As. 11 2 per acre	REMARKS.
1819 0	876	1 55	M n l e & D lhi b nch pe l
18 0- 1	14 646	20 58	
1821 2	24 619	35 2 9	
182 3	21 458	30 49	
182 4	36 015	51 609	Drought
18 4 5	6 647	38 185	F m
18 5 6	48 374	69 3 0	
1826 7	33 975	48 686	Rohtak branch opened
18 7 8	34 161	48 053	
1828 9	52 953	75 882	
1829 30	53 375	4	
1830 1	57 700	8 684	
1831	51 016	73 106	
183 3	6 805	94 99	
1833 4	1 48 783	2 13 0	I
1834 5	1 14 065	1 63 455	
1835 6	1 10 603	1 58 404	
18 6 7	1 53 177	2 19 503	
183 8	2 7 378	3 90 318	D glt
1838 9	1 89 645	2 71 761	
1839 40	2 4 383	3 1 541	I in sc ty
1840 1	55 818	3 66 587	C ntr t y t t d c d
1841 2	2 3 069	3 76 978	
184 3	79 300	4 00 37	

135 The terrible famine of 1833 34 gave a new turn to the irrigation question This famine fell with perhaps even greater severity upon the Bangar than upon the Khadir for the canal utterly failed while the people of the latter had at least their wells so long as the cattle had strength to work them The distress feebly described in para 59 paralysed for a whole year the agriculture of the tract But this very distress was the means of securing at one bound an advance in prosperity which might otherwise have taken many

Early History of the Canal, and its effect upon the Bangar

years to attain The canal presented at least a possibility of salvation, and its officers had no longer reason to complain that the water they proffered was not accepted Irrigating villages enlarged and multiplied their channels, numerous other villages which had never before irrigated dug cuts for themselves, often many miles in length, and the area irrigated was limited only by the means of supply, instead of, as heretofore, by the demand Strenuous efforts were made to increase that supply, and the irrigation of 1833-34 was 2¼ times that of 1832-33, while the construction of the Butana branch extended the water to a part of the tract which it had previously been unable to reach The means of irrigation, once called into existence by the pressure of a water-famine, were still available when the urgent necessity had passed away, and the irrigation never again fell to its former level The failure of the rains in 1836-37 raised it above the figures of 1832-33, and the continuance of the drought caused the irrigation in 1837-38 to rise to what Captain Baker, the Superintendent of Canals, declared in 1841 to be the maximum capacity of the channels as they then stood But the supply was still uncertain, and apt to fail when most needed The whole system of canals and their subsidiary channels had been called on to perform a task far in excess of that for which they had been designed, the call had been urgent, and the necessary adaptations had been made as best they could, and on the spur of the moment The arrangements at the heads for supplying the water from the river were also very imperfect, and too often the canal broke down just when there was the greatest need for its services

After 1833 cultivation made enormous strides, and from that time till the regular settlement the prosperity of the *Bangar* was unbroken save by the epidemics of 1841 and 1843, for scanty rain meant nothing more disagreeable than high prices to villages protected by the canal These epidemics, however, assumed a special severity in the canal-watered tracts, and inaugurated for them a reign of malaria the continuity of which has never since been broken

136. The figures of statement XXI show very clearly by comparison with the Khadir the effect which the canal had upon the history of the Bangar They are the best I can give, for the imperfection of the old records, the utter want of system in the old returns, the constant addition of lapsed revenue grants to the rent-roll, and, above all, "the arbitrary and almost uncontrolled authority exercised by the Collectors in revenue matters," make any attempt at a complete tabulation of demands and balances altogether out of the question The following figures show the early assessments of most of the Panipat villages, and when we consider the increase in cultivation shown between 1828 and 1842, and remember that canal irrigation practically dated from 1834, we can realize the terrible severity of the early assessments

Early History of the Canal and its effect upon the Bangar

Ea1ly Pampat Assessments

G p V ll g	I ANIPAT KHADIR								PANIPAT BANGAR								
	N cf V ll g	F t ettle t 1817 I	S d ttl m t 18 6	Th d ttl m t 1835 37	D m d n 1841	R g l ttl t 1842	CULTIVATED AREA IN 18 8	CULTIVATED AREA IN 184	N f V l g	I t ttl 1817	S d ttl t 18 1 23	Tl d ettl n e t 1826 30	F th ttl e t 1834 6	D n d n 1841	R t ttl m t 1842	CULTIVATED AREA IN 18 8	CULTIVATED AREA IN 184
		R	Rs	R	Rs	Rs				Rs	R	Rs	P	Rs	P		
C o 1 I	5	1 40 355	1 13 000	1 08 609	1 1 7 1	87 965	8 73	1 66	1	73 856	55 63		53 781	5 596	50 986	17 946	18 652
II	8		2 480	17 802	18 116	14 6 2	5 070	5 37	25	66 100		71 994	64 97	61 623	72 716	1 064	9 0 6
III	5			14 37	14 339	12 667	3 8 4	4 746	1		50 260	45 4 0	41 880	40 4	43 659	13 195	17 701
IV									11		8 545	27 795	7 75	27 3 1	30 08	8 19	1 46
V									4			15 780	15 550	15 550	15 98	5 6	6 676
TOTAL	06			1 40 708	1 46 1/6	1 15 254	37 626	41 645	64				0 783	1 98 3 4	2 1 65	65 758	85 411

137. Regular Settlement of 1842.—In 1837 a revision of settlement under Regulation IX of 1833 was ordered, and Mr Alexander Fraser reported on Panipat Bangar in 1839 His report is lost, but he slightly reduced the current demand His proposals were rejected, not only as being inadequate to the capabilities of the Tract, but still more as being unequal in their incidence, while his survey was found to be so incorrect that the whole work had to be done over again Mr Edmonstone then took charge of the settlement, and finally reported on it in 1842 The report has been reprinted in "Settlement Reports of the Delhi Territory, Lahore, 1874" In every Khadir village but one the new demand was lower than the existing one, and in every village but two, lower than that first assessed upon it, the total reduction was about 15 per cent, and the incidence of the revenue per cultivated acre was Rs 2-11 In the Bangar the current demand was raised by 6 per cent, but reductions were given in all the finest and largest villages The incidence upon cultivation was Rs 2-8-11 At the recommendation of the Settlement Officer all outstanding balances were remitted, and the people at length had a fair chance of prosperity

138 The new assessment not only possessed the unprecedented merit of moderation, but it bestowed the still greater boon of a distribution of the burden bearing some intelligible relation to the means of bearing it Hitherto, each assessment had been chiefly based upon the one before it, reduced in such degree as was thought absolutely necessary to keep the inhabitants from absconding What rates were used had been applied to cultivated or culturable areas, without distinction of kinds of soil, or of irrigated and unirrigated land The new settlement was based upon rates carefully estimated for each of the three kinds of soil in both its irrigated and dry conditions The extravagant difference between the rates paid by *Jats* and those demanded from *Gujars*, which had imposed upon the former what Mr Edmonstone characterises as a severity of taxation "of which, in the course of my experience, I have seldom found similar instances," was in a great measure removed The long term of the settlement gave substance to the relief, and as Mr Lawrence says, "the people were remarkably well pleased" This settlement is the one I have just revised

139 The Mandal Tract—The early history of the Mandal Tract, which had been made over to the assignees in 1806, differs materially from that of the remainder of the Tract as sketched above, for up to 1847 there was no fixed demand, the Mandals collecting their share of the produce in kind The state of the Tract has been described in §§ 93 and 117, and the Mandal villages were pre-eminently notorious for turbulence and crime They were almost wholly held by Rajputs, proud, quarrelsome, and fearless looking upon agriculture

Causes which led to the Settlement

as derogatory they were cattle graziers by profession and cattle lifters by hereditary taste The few large villages in which they were concentrated were elevated far above the surrounding plain upon the accumulations of centuries were surrounded by deep ditches and high walls with forts at the four corners could only be entered by strong gateways with massive doors were composed of lofty houses which turned their loop holed backs to the narrow winding streets and were built almost entirely of brick From these strongholds they drove forth their herds to pasture while their servants tilled the scanty fields Watchers on watch towers and high trees throughout the jungle constantly scanned the plain beneath and on the approach of danger men and cattle sought the shelter of the village or found yet greater safety in the pathless intricacies of the forest Such were the people from whom the Mandals holding indeed the title of *jagirdar* yet possessing neither the name nor the authority of an executive officer had to realize the revenue assigned to them by Government

140 Mandal Management —Under these circumstances the collection of rent from the villagers by the Mandals was a constant struggle between exaction and oppression on the one side and audacity and cunning on the other

The Mandals themselves deprived of the mental stimulus to which the warlike times just past had accustomed them found that harassing and opposing the Government officers even to lengths which would now a days infallibly end in a visit to jail did not afford them sufficient excitement and fell to quarrelling among themselves The villagers fully entered into the spirit of this pursuit Many of the largest villages were held jointly by the various Mandal families and the boundaries of all were but loosely defined and the people found that it was at once profitable and exciting to play off one Mandal against another *The chiefs themselves were for the most part ignorant and* illiterate and more inclined to pleasure than business and the management of the estates was left in the hands of dishonest and unscrupulous stewards whose interest in them was strictly confined to the immediate profit that could be made from them Thus arose that bitter feeling of hostility between the villagers and the Mandals which exists in scarcely diminished intensity to the present day *

141 Causes which led to the Settlement —The pargana thus managed had always been a thorn in the side of the authorities At first the villagers had probably rather the best of the contest But as order spread and authority was established the position enjoyed by the Mandals their greater knowledge of the law and their longer

The [illegible]

purses gave them a very decided advantage As early as 1827 the Collector reported that the Mandals exercised very great oppression In 1834 Mr John Lawrence wrote that they were brutally unfair and extortionate, and the instances he gave in support of his assertion are such as it is almost incredible should have been permitted by the authorities[1] Eventually matters reached such a pitch that Government had to appoint a manager to act for the Mandals in some of the larger estates

142 Meanwhile the Bangar and Khadir had been steadily progressing and cultivation extending Even in the Nardak improved administration had done much to reclaim the people from their lawless habits, and in 1847 only 12 of the 93 villages were uninhabited, and those were small ones But the proportion of the area under cultivation was still exceedingly small, the "police officials openly connived with the notorious depredators of those parts," and the Nardak was "the most troublesome and the only turbulent part of the district" Such was the condition of the tract when the Lieutenant-Governor marched through it in the end of 1844

143 Directions for Settlement—The impression made upon him by what he then saw, and the detailed instructions which he issued, will be found at length in my Assessment Reports[1] The following extracts will show the considerations which led him to direct that a regular settlement of the Mandal villages should be effected—

In marching from Karnal to Kaithal, the Lieutenant Governor was much struck with the poorness and bad management of a great part of this estate, and had many communications with the Mandals on this subject * * * * The estate is large and valuable, whilst the permanent quit rent with which it is charged is trifling The Mandals are understood to have been already great gainers by the exchange, whilst by good management the value may be very greatly improved The villages are British territory, subject to our laws in all branches of the administration

If security of property and substitution of law and order for uncertainty and misrule are the effects of the present mode of recording rights in the Revenue Department, and those effects are found to be beneficial in *khalsah* estates, they will be equally or much more so in *jagir and istamrari* estates It is very doubtful if any circumstances justify the Government in leaving subordinate proprietors at the mercy of an assignee of the Government revenue, without interfering to define and record the rights of all parties

Circumstances in this case, however, particularly bind the Government to interfere The lands were assigned by this Government, who are therefore bound to come forward and provide that no wrong

141 [1] A R 219
143 [1] A R 220

is inflicted by the act of assignment which resulted from the policy of the day There are no old established and doubtful claims of proprie tary right to investigate The village communities remain in all their integrity the unquestioned owners of the soil and often able to resist by physical strength even the just demand of their superiors If by our police we deprive them of the benefit of their strength we are bound to substitute for their innate means of resistance the protection of legal arbitration

The Mandals did not very strongly object to the measure They were apprehensive that it might curtail their influence and considera tion though they perceived that it might augment their income The measure ought not to rest on their approval or rejection and the Lieutenant Governor is fully convinced that justice and sound policy alike demand its execution

144 Mandal Settlement of 1847 —Mr Gubbins at once com menced the settlement which was sanctioned in 1847 The opera tions were conducted under circumstances of the greatest difficulty The conquest of the Panjab was then in progress and at the frontier station of Karnal the demands upon the time of the civil officer were heavy and inexorable Both the professional and settlement surveys were practically unchecked and each accepted the figures of the other The Mandals prosecuted their conflicting interests with money argu ment and occasionally armed retainers the people unaware of its im portance were profoundly indifferent to the correctness of the record The utter inaccuracy of the work is fully described in §§ 221 and 239 of my assessment reports The Settlement Officer did his best to patch up his material by arbitrarily increasing or diminishing all recorded areas in different villages according as he thought the sur vey figures too small or too large but he confessed that the record was eminently unsatisfactory and therefore proposed that sanction should be accorded to the settlement for a term of five years only

145 But the errors of survey and record were immaterial com pared with the capital error which vitiated his assessments His duty was to assess the dues of the Mandals which were measured by the legal and regulated right of Government to the land revenue Hi therto the Mandals had collected rent not revenue and almost always in kind Theoretically the new demand should have been under the rule of the day two thirds of the average collections thus made Instead of this he assessed the Nardak at *more than the average past collections as stated by the Mandals themselves* though their state ments were known to be grossly exaggerated and though a fixed money demand was being substituted for a self adjusting levy of a share of the produce as it varied with the varying seasons Besides these one sided estimates Mr Gubbins had as a guide the rates used by Mr Edmonstone in Panipat and by Captain Abbott in Kaithal In the Khadir and Bangar the Panipat rates were fairly applicable and

kept his assessments well *below* the estimates of past collections But in the Nardak he actually adopted almost the same rates for an arid tract held by a scanty and pastoral Rajput population as had been applied to the Panipat canal tract His assessments were far heavier than those imposed in Kaithal villages in no respect inferior to their neighbours of the Nardak, while the very Kaithal settlement which Mr Gubbins characterized as so unintelligibly low that he could not take it as a precedent, was shortly afterwards officially described as "a by-word in the Panjab," it was never sanctioned, a reduced assessment broke down almost immediately, and a second and third reduction had to be made

146. The settlement thus made was received with the greatest discontent The people refused to accept it, and the Mandals, while petitioning against it as unduly low, encouraged the people in their refusal by promising them easier terms

147. The feeling of the people was especially embittered by the transfer to the Mandals in absolute property, under the directions of Government, of all villages which had been abandoned when the Mandals took over the Tract, and to the resettling of which they had in any way contributed, either by loans, expenditure of capital, or settling cultivators As the Collector wrote —"The greater part of these are villages whose owners were obliged to leave their dwellings during the anarchy preceding our rule, and who, on returning during the first years of peace, received *baithak abadi* from the Mandals, and with it the verbal gift or acknowledgment of *biswadari* rights They have, in many instances, since that time sunk wells at considerable expense, and built *pucca* houses with the knowledge and consent of the *jagirdars*, and they say, with considerable show of justice, 'the son is taking away from us that which the father gave, and we are now being deprived of our possessions after we have been induced to lay out on the *biswah* all the money we could collect for that purpose'"

Ten inhabited and 12 uninhabited villages, comprising an area of 20,850 acres, were thus made over to the Mandals, they still hold them as owners, and I believe that this, more than anything else, has conduced to envenom the minds of the people against the jagirdars

148. The settlement was sanctioned, at the request of the Settlement Officer, for five years only, and the people eventually accepted the terms offered Mr Gubbins' report is printed as No XXXI, Part VI, Vol II of Selections from public correspondence, North-Western Provinces Agra, 1852

149 Revision of 1852.—Within these five years balances of Rs 65,500 had accrued on an assessment of Rs 30,763 in the 28 leading villages of the Nardak Some balances were also owing in the Khadir

The Collector reported that most of the people would gladly return to direct management and would certainly refuse to renew their engagements that it would be impossible to find farmers and that the Mandals had taken out decrees for their balances and would probably put up the villages to sale The Lieutenant Governor discussed the matter at Delhi and Mr Ross was directed to revise the assessment

150 He was directed to arbitrate between the Mandals and the people as he would between Government and its revenue payers He was to reduce the assessment if too heavy and to endeavour to *induce the Mandals to relinquish so much of the balances as might* appear to be due to over assessment As they held decrees nothing more than persuasion could be used but if they declined to abandon unjust claims the estates were to be assessed at exceedingly low rates so as to render the liquidation of balances possible

Mr Ross failed to induce the Mandals to relinquish any part of their balances but with great difficulty he brought them to accept payment by instalments He reported that he had seen many parts of the country but nowhere had he beheld so much poverty and depression as in many of the large villages of the Nardak that house after house was deserted and in ruins that there was an absence of everything indicative of comfort and that the number of cattle that had died during the season would still further affect the prosperity of the villages He also pointed out that independently of the impoverished state of the estates (which alone would make it impossible) the absence of the majority of the villagers must render any attempt to collect even a portion of the balances abortive for famine had driven the greater part of the Nardak population to other and more fertile districts there to gain a livelihood as they best could and graze their starving herds Yet he wholly failed to realize the inordinate nature of the assessments he was revising he was of opinion that their failure was owing to a quite exceptional run of bad reasons and while he proposed a quite nominal reduction of 6 per cent in the Nardak and 2 per cent on the whole Tract he directed the balances to be liquidated by yearly instalments of half the assessment thus really *enhancing* the demand which the people had been wholly unable to pay by 46 per cent

151 The people of most of the Nardak and of some of the Bangar villages where the canal was beginning to do harm refused the terms and of a total demand of Rs 1 00 901 only Rs 56 239 was engaged for No farmers were forthcoming and the Mandals took the recusant villages into direct management They also sued out execution of their decrees for balances but the Sudder Board flatly refused to allow any estate to be put up for sale till Government orders on the revised settlement should be received and thus saved the Nardak from wholesale confiscation The orders of Government were delayed and in 1855 it was found that direct management had not even realized the

Revision of 1856

assessment, much less reduced the balances, while in the Nardak villages which had engaged for the new assessments, new balances had steadily accrued year by year

152 The Lieutenant-Governor once more discussed the matter at Delhi He decided with regret that it was not within the competence of Government to take the pargana entirely under it own management, paying the revenue collected to the Mandals He remarked that there was "good reason to apprehend that frequent failure of crops was much more the rule prevailing over the Tract than Mr Ross had been led to believe in 1852," and he refused sanction to the assessments of 1852, and directed Mr Ross to make another revision

153. Revision of 1856—Mr Ross reported that most of the Nardak, and especially the recusant villages, had sensibly deteriorated even from their "wretchedly depressed and impoverished condition in 1852, that one and a half out of the three years that had elapsed since the *pargana* had been last assessed, had been, if not seasons of complete drought, at least seasons of partial famine, and that it was only surprising that the estates had not sunk altogether" The canal villages he found to have been impoverished by the "steady and rapid increase of *reh*, all being more or less affected, and in some instances incalculable damage having been done, while every year sees it increasing" He also animadverted upon the Mandal management —"No consideration is ever shown, no concesssion granted with a good grace, and in seasons of scarcity there is no disposition to be moderate On the contrary, the sole aim is to squeeze as much out of the estates as possible," and he instanced a village in which no crops had been sown owing to drought, and where the Mandal waited till a lapse of nine months had removed all proof of this fact, and then applied for the realization of a money-rate, on the ground that the people had prevented his servants from measuring and appraising the crops as they stood He took the rates Captain Larkins was then using in his revision of the Kaithal settlement, increased them somewhat, and adopted them as a guide But his assessment and note-books show that he made but little use of them, trusting rather to his knowledge of the Tract, and to the past history of each village He reduced the assessment of the whole pargana by 20 per cent In the canal tract he relieved 10 out of the 15 villages, the total reductions being 16 per cent In the Khadir a reduction was given in six villages, amounting to 12 per cent on the whole In the Nardak the demands of all but five villages were reduced, in many cases to less than half the demand of 1847, the assessment being Rs 38,190 against Rs 50,759 in 1852, and Rs 53,848 in 1847 As nothing more is heard of the old balances, it is probable that the collections between 1852 and 1856 were credited against them, and they were thus got rid of The following figures show the result of the two reductions of assessment —

Revision of 1856

Early Karnal Assessments

	Tract assessed	No of Village	Revenue Paying Areas — First settlement 184 47 — C lti ati n	First settlement 184 47 — P t	Present state, 1876 — Culti t on	Present state, 1876 — Past e	Amount of Assessment — F st settl m t 184 47	R 1 c d 1852	I educed n 1856	E ist ng in 1876	Rem rks
Nardak	Ma l est tes	67	34,49!	9 989	38 17	8 89	53 848	50,759	38 190	37917	
	Other v llag s	7	2 49	8 606	977	10 709	4 700			4 46	
	T t l	74	36 730	106 595	41 154	92 998	58 548			4 163	
Khadir	Ma dal estat s	11½	7 618	5 975	7 698	3 8 0	15 050	15 014	13 97	1 770	
	Other ll g	35 ½	0 753	11 577	21 785	1 653	48 1 5			44 64	
	Tot l	47	8 371	17 55	9 483	16 473	63 175			57 034	
Bangar	M d l est t	15	16 406	11 385	15 40	6 69	36 068	35 1 8	9 470	9 371	
	Oth villages	17	14 426	10 087	17 442	9 101	32 588			0 60	
	T tal	3	30 83	1 472	32 844	15 793	68 656			59 973	
Total	M ndal st tes	93 ½	58 505	115 349	61 277	9 801	104 966	100 901	80 957	80 058	
	Other vill g s	59/	37 428	0,370	4 204	3 463	85 413			79 11	
	Total	153	95 933	145 719	103 481	1 5 64	190 579			159 1,0	

154. The mutiny and the transfer of the district to the Panjab caused some delay, but in 1860 the Panjab Government, while regretting that the pasture lands had been assessed, and remarking that the assessments were still considerably higher than those of the Kaithal district, which was itself "a bye-word in the Panjab," sanctioned the settlement as having already been in operation for some years The Board of Revenue, agreeing with the Collector, had recommended that the collection of the revenue should be altogether taken away from the Mandals, but the chief of the family had done good service in the mutiny, and as the proposed measure would have been looked upon by him as an indignity, it was not carried out, and Government contented itself with confirming the assessments, "on the distinct understanding that the rights of the Mandals are limited to an assignment of the revenue, and do not extend to the management of the land, and that in the event of calamities of season, deterioration by saline efflorescence, or other reasonable cause, the *zamindars* shall receive the same equitable indulgences as are granted to *khalsah* villages" The settlement so confirmed is that which I have just revised

155. Revenue History since the Regular Settlement. The Nardak—Since 1856 the Nardak villages have, except in famine years, paid the demands then imposed without any very large balances or remissions, so far as we know But of course we know nothing about the realization of the Mandal revenue except when matters reach such a point that Government is compelled to interfere, and the Mandals themselves admit that the revenue has been realized very irregularly and with the greatest difficulty The only events worthy of notice have been the terrible famines of 1860 and 1869, and the drought of 1877, already fully described in §§ 60-4

156. Right of Government to interfere in the Mandal Tract.—During the famine of 1869, the right of Government to suspend and remit revenue in the villages granted to the Mandals, which had been distinctly postulated by the Financial Commissioner and Lieutenant-Governor when the settlement was sanctioned in 1860, was discussed and finally affirmed The Commissioner questioned it, and was of opinion that, even if it did exist, it would be better to let matters take their course, so that the idle proprietors might be sold out of their villages The Deputy Commissioner replied thus —

"The Mandals are practically foreign landlords, and they do not take one particle of interest in the well-being of the inferior or hereditary proprietors of the land, in fact, most of the chiefs are deeply involved, and their only desire is to obtain the revenue at any hazard to the welfare of their villages The Nardak villages are almost all over-assessed, and in the best of seasons pay their revenue with the greatest difficulty, in seasons like the present, to consult merely the views of the Mandals would be ruinous to the estates, already in a more or less

seriously dilapidated condition which will require much attention at the ensuing assessment of 1872

The Financial Commissioner was of opinion that his Bk Cr 53 of 1860 by which *the zamindars* of *jagir* villages are declared entitled *to precisely the same consideration as the zamindars of the khalsah* villages in the case of diluvion calamity of season or over assessment applied and that the duty of the Government in the matter was so clear that it would be abrogating its prerogative were it to refuse to interfere and the Lieutenant Governor in his Secretary s letter No 596 of 23rd April 1869 concurred in the view of the Financial Commissioner as to the right and duty of Government to interfere between the revenue payers and the *istemrardars*

157 Revenue History since the Regular Settlement The Khadir —The history of the Khadir since the regular settlement has on the whole been satisfactorily monotonous In 1843 an epidemic occurred more terrible even than that of 1841 In 1851 a drought began which continued to 1852 almost caused a famine and the effects upon the crops were infinitely disastrous The famine of 1859 60 was in some degree compensated for by the bumper crops of 1861 62 In 1869 it was estimated that 20 000 cattle died in the Khadir and Bangar tracts and the effects of this loss are felt to this day heightened as they have been by the grass famine of 1875 77 The absolutely useless Rer escape has been dug right across the tract impeding traffic holding up the Bangar drainage in a great lake between the Khadir bank and the Grand Trunk Road and allowing it to burst through the rotten banks to the great injury of the cultivation below it and of the health of the city of Panipat And much damage has been done by saline efflorescence and swamp in the north of the tract where the canal and the Burha Khera escape traverse the Khadir The river has done much harm by cutting away good soil and in some years by passing in flood down its old abandoned channels In his assessment of 1847 Mr Edmonstone did not sufficiently allow for the inferior soil and still more inferior cultivation of the Rajputs and Saiyads who hold the more northern villages and some of these villages have utterly broken down and considerable reductions have been given in one instance to the extent of 33 per cent of the whole demand But on the whole the settlement especially in the Panipat tehsil has worked well and the tract is prosperous with the exception of its northern extremity

158 Revenue History since the Regular Settlement — The Bangar —In the Bangar the later no less than the earlier history depends almost wholly upon the canal and its action in the tract it traverses The famine of 1859 is still remembered as the year in which all the canal villagers cleared up their accounts with the village money lenders while in 1869 though the cattle suffered

no less than elsewhere, yet the luxuriant crops and high prices went far to compensate the people for the loss From 1871 to 1874 they suffered severely from heavy rains, and in the drought of 1875 the peculiarities of the season conspired against them to prevent them from taking advantage, as usual, of a scanty rainfall But the vicissitudes of the season are quite overshadowed in the Bangar by the terrible evils which the canal system has caused by interference with the natural drainage of the country These evils constitute the most important question with which we have to deal in this district, and I shall be obliged to describe them at some length

159. Defects of the Canal System.—When the canal was re-opened, every facility was offered to such villages as would make use of the water In most cases an old Imperial water-cut still existed, which they were allowed to clear out and use, and when there was none, they simply made themselves a channel straight from the nearest point on the canal from which water would flow to their fields As the demand for water has extended certain large distributaries have been constructed which have absorbed many of the early channels, while others have been deepened, enlarged, and extended The main canals, too, have been deepened, and their banks raised, till the water touches the crown of the arches in the bridges Most of these extensions were made under pressure of urgent need, and therefore without interrupting the supply, and too hurriedly to admit of due consideration being given to them, or of the best possible scheme being selected Thus, while the faulty alignment of the old canal and channels is still followed, their carrying capacity has been so increased that in most parts the surface level of the water, and in some places the bed of the canal, is above the surrounding country, and the water is thus forced into the sub-soil by hydraulic pressure* A great deal of the canal is, of course, in embankment, and in many of the secondary channels, silt clearances, often dating from the time of the *Mughals*, have raised the banks to a height of 12 and 15 feet, and this system of embankments has been constructed with so little reference to the natural drainage that it intersects all the drainage lines of the Tract, and throws back the surface water over the surrounding country This is especially the

* The total irrigation from the Western Jamna Canal at various periods is shown below —

Years	Acres
1820	1,255
1825	38,185
1830	76,486
1840	321,541
1870	496,542
1878	507,974

The average depth of water in feet at Karnal bridge at various periods is as follows —

Years	Feet
1827	4 81
1830	5 20
1835	6 93
1870	9 81
1875	10 10

And the bottom from which these depths are measured has been raised considerably during the period over which these figures extend

case in Karnal Bangar where the canal runs in embankment below the Nardak step in the Bangar and the Khadir bank in the Khadir and holds up all the drainage which runs southwards from the high lands The highland distributaries which cross the lowland to reach the villages on the crown of the slopes act as so many dams above which huge swamps form while the loops of the old channel in which the canal used to run and which are cut off by it now that it has been straightened act as breeding beds for crocodiles and malaria

160 Excessive Irrigation practised by the People —But if the defects of the means of supply have given rise to evils the pernicious system of irrigation pursued by the people coupled with its rapid extension have increased those evils a hundred fold While some 8 per cent of the central canal tract is permanently under water 40 per cent of the whole area and 80 per cent of the cultivated area is irrigated much of it twice in the year much of it for rice cultivation and almost all of it every year without intermission Now canal irrigation is not like well irrigation When every drop of water used is represented by additional labour to man and beast the greatest economy is exercised not so when a stroke of the spade is sufficient to set flowing an unlimited supply In the former case the cultivator divides his fields into small beds which are irrigated successively and practically answer the purpose of terraces economising the water not only by reducing the depth needed but also by confining the area of already watered ground over which the water has to pass On the canal on the other hand if a field is six inches lower at one end than at the other a seven inch bank is made round it and the whole field put under an average of four inches of water in order to get one inch at the top each spot in the field after receiving its water is still passed over by the water which goes to spots beyond it and if a leak occurs in the channel or if a bullock breaks down the side the water is allowed to run to waste for hours before any trouble is taken to remedy the evil The duty of the canal water for 1874 75 was 74 acres in the autumn and 89 in the spring per cubic foot of supply Supposing that the loss by evaporation and waste is counterbalanced by the fact that much of this land is watered in both seasons this represents a supply of 6[illegible] inches in the year A well working 13 hours a day for 150 days in the spring and 80 days in the autumn and watering 15 acres would have to supply at this rate 6067 gallons per hour Moreover the well water is itself drawn from the subsoil supply and all that is lost by evaporation during the process of irrigation is so much lost to that supply while in canal irrigation all that is *not* so lost is so much *added* to that supply

161 Resulting Swamps —The result is that the whole country is water logged by the canal water being forced into it from below while the cultivator drenches it from above And when the rain

comes in tropical abundance, instead of finding a thirsty soil ready to drink up the greater part, it falls upon a country already saturated with water, and the whole volume is thrown into shallow drainage lines with an almost imperceptible slope These again, being barred at intervals by high banks crossing them at right-angles, silt up, and the water is thrown back and covers the country for miles Thus, when the rainfall has been unusually heavy for several years in succession, there are hundreds of acres in which the autumn crop, if it can be sown at all, is almost or altogether drowned, while such little land as appears above the water soon enough to plough for the spring crop is so moist that the yield is barely worth the trouble of gathering And there is a still larger area on which, after a heavy rain, the water stands some inches deep for three or four days at a time, to the great injury of the crop No means exist of carrying off the water, for, as the Chief Engineer reported in 1867, " the level of the water in the canal can very seldom be reduced in the rainy season, just when the drainage of the swamps is most needed, as, even if the supply at the heads be shut off, the quantity of water draining into the channel above Karnal is sufficient, and sometimes more than sufficient, to fill the channel at and below that point"

162. Resulting Saline Efflorescence —Nor is it only swampage that results from the causes above mentioned, for if it were the higher land might be cultivated as the lower became unculturable For countless ages the rain falling upon the soil has washed down with it more or less of its saline constituents into the spring water below That water now has been raised to within such a short distance of the surface that it can rise to it by capillary attraction, carrying with it salts which have been thus accumulated As fast as it reaches the surface, wherever the cultivation or the shade of a thick tree does not interfere with radiation and evaporation, the fierce heat of an Indian sun concentrates the solution Where the water is so near the surface and the surface moisture so great that diffusion can take place, and the water thus made heavier can return by the way it came, no great harm is done But over most of the area this is not the case, and the water evaporating leaves the salt deposited, and this process, repeated year after year, eventually covers the soil with a flocculent layer of alkaline salts, lying like fresh-fallen snow, often three or four inches thick The first rain that falls is not heavy enough to reach the main drainages, and sinking in *in situ* carries with it the salts, thus preserving them by a sort of occlusion from the mechanical action of heavy rain, to reappear when the next sunny day restores the process of evaporation *

* An immense amount of information and discussion on the subject of reh, its origin, formation, effects, and cure, will be found in the report of the Aligarh Reh Committee of 1878, in Selections No XLII (1864) from Government of India correspondence, P W D, and in the printed correspondence with Board of Revenue, N W P, No 231 of 21st October 1874, and Government, N W P, Revenue Department, Index No 61 83 of May 1877

Effects upon Health

The salts lie thick round the edges of the cultivation and notwithstanding the bank made to keep them out are carried over the boundary by the wind and rain and deposited in the hollows of the out lying fields When once cultivation is thus destroyed the ca pillary process immediately begins and thus the evil is gradually eating its way from outside into the still fertile fields every inch gained being made the stepping stone for further inroads The sa line water and such grass as is able to spring up in the salt impreg nated land give the cattle diarrhœa and glandular affections enfee ble and eventually kill them while the large area which is each year covered with water and aquatic plants in the rainy season and dried up by the sun during the remainder of the year exhales from its putrefying vegetation a malaria which poisons the blood of the villagers renders them impotent and kills them by fever and spleen disease

163 Effects upon Health —The epidemic of 1841 43 which assumed especial virulence in the canal tract and caused the aban donment of Karnal as a cantonment led to the appointment of a committee by the Supreme Government to investigate the matter Their report was published at Agra in 1847 In 1867 Surgeon Major Adam Taylor was appointed to make a further inquiry and his report was published as Selection No VI of 1870 from Records of Government Punjab Some of the figures of both reports are sum marised below —

Statistics of Disease on Western Jamna Canal

Loc l ty	D t ce f m Can l	D pth f te be l w f ce	P nt g f l ge pl e	Percentage suf fering from fever in 1844	1845	1846
PEPOPT OF 1847						
Western Jamna Canal						
D lh B ch	W th half a m le	11	58	51	45	41
	Mo th a m le	18	49	51	49	40
R htak B anch	W th half a m le	28	44	47	38	27
	M e th m l	48	29	34	34	27
B t B a ch	M e th n h lf m l	1 2	16	41	36	22
Non Canal Villages						
D lh T t y		88	11	3	28	11
H gh D b		24	8	37	31	20

Effect upon the Revenue

Statistics of Disease on Western Jamna Canal

Locality	Distance from Canal	Depth of water below surface	Percentage of large spleens	Percentage suffering from fever in		
				1865	1866	1867
REPORT OF 1867						
Delhi Branch	Within half a mile	6	61	33	20	63
	More than a mile	11	44	40	38	66
Rohtak Branch	Within half a mile	5	41	36	36	51
	More than a mile	7	47	44	54	68
Butana Branch	More than half a mile,	45	7	33	28	32
Between the Canals		8	47	34	41	65

Dr Taylor shows that 60 to 80 per cent of the inhabitants in *many* of the Bangar villages were suffering from enlarged spleen and yearly attacks of fever He speaks of the "languor and depression of manner, and stunted and shrivelled forms of the inhabitants of the villages in close proximity" to the swamps, and of the absence of "the strength to repair damages or to preserve comfort" The heavy rains of 1871-76 rendered the sanitary condition of the canal villages worse than ever

164. Effect upon the Revenue —Very soon after the regular settlement, the deterioration of the soil forced itself upon the attention of Government In 1850 the people of some of the worst villages determined to abandon them and settle in Jind unless relief were afforded The Government, however, decided that the terms of settlement must be adhered to, and that the people had "no right to any consideration," and all that was done was to take certain villages under direct management, the Sudder Board declining to deal with individual estates, and directing that a general report should be made when, and not till when, the revenue could no longer be realized

As pointed out by Mr Sherer, "the Jats of this district will pay up as long as it is possible for them to raise money by any device, or at any immediate sacrifice, and when they find default inevitable, they consider the worst come, and leave their villages" Thus the break up was "sudden and complete" In 1856 most of the inhabitants of the worst villages deserted them and fled to Jind, and the villages utterly broke down The Government censured the "lamentable apathy" of the Collector, and Mr Sherer, Collector of Aligarh, was specially deputed to survey and report on the Tract

Measures of Relief

165 His admirable report was submitted in 1857 and is printed as part of Selections No XLII (1864) from Government of India correspondence P W D pages 4 15 He showed that the water level had been raised by the canal from some 60 feet to in many places two or three feet from the surface that the fertility of the soil had been very generally diminished and that the evil had not nearly reached its limits but must necessarily continue to spread almost indefinitely He says —

The possible resources of the *biswadars* of several estates are now exhausted They have borrowed money at extravagant interest they have become the mere farm slaves of some *Bania* residing in their village *they have sold the trees on their estates they have sold* their daughters they have sold their silver ornaments and brass utensils and as many of their cattle as it was possible to spare and no conceivable source of income is any longer available

From a sanitary point of view he found a state of things existing very much worse than that described by the Committee of 1847

He speaks of the miserable disease engendered by the tainted water and malarious exhalations of the soil of the spectacle of sick women and diseased children crouching among the ruins of their houses (for in many cases the rafters had been sold) of haggard cultivators wading in the swamps and watching their sickly crops or attempting to pasture their bony cattle on the unwholesome grass

166 **Measures of Relief**—Between 1859 and 1861 the villages were taken up in detail considerable initial reductions were given and principles were laid down upon which annual relief was to be afforded where necessary and revenue was to be reimposed where land had recovered The whole revenue remitted on this *account since 1856 has been about Rs 4 58 550*

167 I have no hesitation in saying that the relief so afforded has been wholly inadequate The initial reductions welcome as they were to the sufferers do not seem to me to have accurately measured the degree of mischief The demand on such land as had become absolutely and obviously unculturable was remitted but little if any allowance was made for the deterioration of the remaining cultivation for the impoverishment due to an ever increasing burden borne for so many years for the sickness of people and cattle or for the almost total absence of pasture No reduction was given where the decrease in cultivation was less than 10 per cent on the whole cultivated area of the villages and the result was that individuals and sub divisions of villages which had lost a much larger proportion of their land failed to obtain relief

Extent of the Evil

168. As for the subsequent yearly action, it is difficult to characterise it too strongly The directions of Government would appear to have been entirely overlooked, and no intelligent review of the whole circumstances of a village ever attempted No remissions have ever been made, so far as I can discover, on account of general deterioration apart from decrease of cultivation That it became merely a matter of arithmetic—so many acres rendered barren at so much an acre, find the reduction in assessment—was perhaps only to be expected in what had become a part of the yearly routine of the tehsil And, to crown all, a mistaken reading of the orders confined the inquiry to such parts only of the area of each village as had been badly injured before 1860, so that subsequent spread of the evil was not taken into account at all Map No I shows in sepia and neutral tint the areas affected by *reh* and swamp There are great plains of 8 to 10 miles long, covered almost wholly by white salts lying like snow on the ground, and the canal and many of its distributaries are lined on either side by huge swamps throughout a great part of their course

169. Extent of the Evil.—The figures of Statement VII will give some idea of the extent of harm which has been done by these evils I have included villages in the 1st, 2nd, 3rd, and 4th classes, according as 75, 50, 25, or less than 25 per cent of the area is recorded in our papers as unculturable In the whole of Class I, and too many villages of Class II, there is really hardly a cultivable acre to be found, the area so classified being so affected by salts and swamps, and so scattered about the barren plains, as to be really not worth cultivating Picked villages would tell even more dismal tales The following figures, which relate to the village of Baoli situated at the bifurcation of the Delhi and Hansi branches, tell their own story

History of Mauzah Baoli

Year	Demand	Collections	Cultivation	Pasture	Barren	Population
	Rs	Rs				
1828	3,672		1,213	1,519	93	1,539
1842	3,501		1,699	134	1,686	
1849		3,034			2,179	
1850		2,600	1,076			
1851		2,720	809			
1852		2,541	955			
1853		3,503	762			1,396
1854		2,235	778			
1855		1,050				
1856		1,215	704	16	2,799	
1857		1,474				
1858		1,474				
1859	2,051					
1868			721	542	2,256	1,076
1876	1,709		646	238	2,751	892

Extent of the Evil

170 General Strachey did not speak one whit too strongly when he said in 1867—

The portion of the canal near Karnal is a disgrace to our administration and has been for years past It creates most pestilential swamps which must be got rid of unless we are content to perpetuate this abominable nuisance which has been talked about for the last 25 years during which period no serious attempt has been made to abate it For my own part I distinctly reject all share in any counsels which tend to delay in meeting this most crying evil I most fully admit the great importance of doing what has to be done with the most scrupulous regard to economy and I am ready to sacrifice all thought of elegance or congruity for the purpose of avoiding any considerable outlay which is really not needed to secure efficiency But it is impossible for me to affirm with too great positiveness the moral obligation which rests on our Government to put an end with all possible speed to the discreditable condition of the large tracts of land along the Western Jamna Canal which are converted into swamps of the most pestilential nature not only destructive to the health and life of the population but occupying in a manner far worse than uselessly some of what might be the very best lands It will be *necessary* to do something and what is necessary should not be delayed till other works which have no relation to this part of the scheme are completed

The new canal is now nearly complete the re alignment of the distributaries has already done much good and the completion of the scheme will doubtless go far to cure the evil of swamps But the efflorescence will not be so easily got rid of and it will I believe be many years before this scourge is very materially decreased

CHAPTER VI —TRIBAL ORGANIZATION OF THE PEOPLE

171 Census Statistics.—Statements XXII to XXVI give full information with regard to the *village* population of the tract, the figures being taken from a census made by the settlement staff They represent, not the number of people actually in any village on any given day, but the number of ordinary residents of each village, independently of whether they were present or absent at the time of census The census of 1881 gives the following populations for the towns of Karnal and Panipat, which are excluded from my statements —

	Hindu		Musalman		Others		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Karnal	8,255	6,960	4,148	3,402	223	145	12,626	10,507
Panipat	3,711	3,623	8,340	8,577	380	391	12,431	12,591
Total	11,966	10,583	12,488	11,979	603	536	25,057	23,098

Map No IV shows the density of the population, V shows the former and VI the present distribution of tribes in the tract, and XII shows the size of the towns and villages

172 Former Inhabitants—The Tagas are probably the oldest of the existing inhabitants of the tract, they originally held a great part of the Khadir, and now hold most of pargana Ganaur, and as, wherever the river has not passed over the land within recent times, Tagas are still in possession, it is not improbable that they were driven from much of their old territory by changes in the Jamna

173. The Rajput bards and the traditions of the people tell us that in old days Chandel Rajputs [1] held Kaithal and Samana, and had local head-quarters at Kohand, whence they ruled the neighbouring portion of the tract The Bráh Rajputs held the country round Asandh, Safidon, and Salwan, while the Pandírs held Thanesar and the Nardak, with capitals at Pundri near Fattehpur, Ramba, Habri, and Pundrak close to Karnal The Mandhar Rajputs came from Ajudhia, and, settling in Jind, expelled the Chandel and Bráh Raj-

173 [1] N W P i, 71ff II T i, 180ff

Census Statistics

puts and took possession of their country the former going towards the Siwaliks and the latter beyond the Ghaggar The Mandhars fixed their capital at Kalayat in Patiala whence they settled the local centres of Asandh Safidon and Gharaunda They are shown in Map Nos V and VI in Gamboge.

174 The Mandhars were unable to make any impression upon the Pandirs who were presently expelled by the Chauhan Rajputs from Sambhal in Moradabad under the leadership of Rána Har Rai and fled beyond the Jamna. The Chauhans made Jundla their head quarters and held a great part of the Nardak and also large possessions in the Doab They are shown in Map Nos V and VI in Burnt Sienna

175 The Tunwar Rajputs[1] originally held Panipat and the country round but would seem to have been dispossessed by Afghans in the early days of the Mahomedan conquest They now hold the country beyond Thanesar and still own a section of the city of Panipat.

176 The Rajput chiefs (Ranas and Raos) would seem subject to *the payment of tribute to Delhi to have enjoyed almost independent* authority up to the time of the consolidation of the Mughal Empire under Akbar or even later and squeezing the Ranas was a favourite occupation of the old Afghan Emperors[1] Their degradation to the position of mere village chiefs is attributed to Aurangzeb who forcibly converted many of them to the Mahomedan faith

177 In the Ayin Akbari the principal castes of pargana Karnal are stated to be Ranghars and Chauhans the word *Kánghar* now used for any Musalman Rajput being probably applied to the Mandhars who had adopted Islam

Those of pargana Panipat are given as Afghans Gujars and Ranghars[1] The surrounding castes were Tagas in Ganaur Afghans and Jats in Sunpat Jats in Gohana Rajputs Ranghars and Jats in Safidon Ranghars in Pundri Ranghars and Jats in Habri and Ranghars and Tagas in Indri The Pandirs held Bhatinda and the Brahs the country about Samana Local tradition has enabled me to make a rough approximation to the tribal distribution at the time of the Ayin Akbari (1590 A D) and I give it in Map No V I think some reliance may be placed upon the *general* features of the map In some cases the descendants of the former inhabitants still periodically visit the shrines existing on the old ancestral site and in particular tombs in the unmistakeable architecture of the Afghans tell every here and there of people who have now disappeared

175 N W P 162 ff

176 Ell 366 375 i 335 a l m y tl place

177 *A A i 518 o*

Local Organization of Tribes

178 It will be observed that Afghans then held a large part of the lower Khadir They had also formerly held a good deal of the Bangar, which was occupied at the time we speak of by Gujars At present there is only one Afghan village, besides part of the city of Panipat, in the whole tract, and I think the total disappearance of this caste must be accounted for by changes in the river It is to be noticed that they have been replaced very largely by Gujars, and I do not think Gujars were ever in a position, as Jats most undoubtedly were, to acquire territory by conquest in this part of the country, especially from Afghans I cannot help thinking it probable that the Afghans left their Bangar villages for the more productive Khadir soil as it was left available by changes in the river, and that they were again, after the time of Akbar, driven out by the branch of the Jamna mentioned in §50 sweeping over the parts held by them The parts near Rakasahra and Barana have, as I have already pointed out in §51, escaped river action altogether in recent times, and are still largely occupied by the original Taga inhabitants But in the intermediate parts of the Khadir the people have only been settled for some eight generations, which, at the usual Indian estimate of 25 years for a generation, would bring their first arrival well this side of the date of the Ayin Akbari

179 The Gujars were, as usual, intimately connected with the Rajputs, and were for the most part settled by them in portions of their territory The Gujars who originally held the country about Naraina were Chokar Gujars, those about Sutána and Nain were Chamains, while those of Kohand and Bápauli were Rawáls The two first clans have been largely replaced by Jats and Rors, while the last has spread over the parts of the Khadir formerly occupied by Afghans

180 Local Organization of Tribes—The primary sub-division of the tribes is into *thapas* or *thambas* A tribal community having obtained possession of a tract, in course of time it would be inconvenient for them all to live together, and a part of the community would found a new village, always on the edge of a drainage line from which their tanks would be filled This process would be repeated, till the tract became dotted over with villages all springing originally from one parent village The people describe the facts by saying that, of several brothers, one settled in one village and one in another, but this no doubt means that the parts of the community that migrated consisted of integral families or groups of families descended in one common branch from the ancestor In this way were divided the many villages known by the same name, with the addition of the words *kalan* and *khurd* (big and little) This by no means implies that kalan is *larger* than khurd, but only that the elder branch settled in kalan, in fact, the old records always use the word *buzurg* (elder) instead of kalan

Admission of Strangers into the Tribal Organization

181 The group of villages so bound together by common descent form a *thapa* and are connected by sub feudal ties which are still recognized the village occupied by the descendants of the common ancestor in the eldest line being however small or reduced in circumstances still acknowledged as the head To this day when a headman dies the other villages of the *thapa* assemble to instal his heir and the turban of the parent village is first tied on his head When Brahmans and the brotherhood are fed on the occasion of deaths &c (*meljor*) it is from the *thapa* villages that they are col lected and the Brahmans of the head village are fed first and receive double fees So among the menial castes who still retain an internal organization of far greater vitality than the higher castes now possess the representative of the head village is always the foreman of the caste jury which is assembled from the *thapa* villages to hear and decide disputes In old days the subordinate villages used to pay some small *chaudriayat* to the head village on the day of the great Diwali The head village is still called the great village the tur ban village the village of origin or the *thika* village *thika* being the sign of authority formally impressed in old days on the forehead of the heir of a deceased leader in the presence of the assembled *thapa* In one case a village told me that it had changed its *thapa* because there were so many Brahmans in its original *thapa* that it found it expensive to feed them I spoke to the original *thika* village about it and they said that no village *could* change its *thapa* *Put kuput hosakta magr ma kum i nahin hosakti* A son may forget his son ship but not a mother her motherhood

182 Admission of Strangers into the Tribal Organiza tion —But the *thapa* is not wholly confined to the original tribe which founded it A man without sons will often settle his son in law in the village as his heir and as the gentes are exogamous the son in law must necessarily be of a different family So too a man will settle a friend by giving him a share of his land The strangers so admitted have in many cases separated their land off into separate villages but just as often they still live in the old village and in some cases have just overshadowed the original family It is curious to note how the fiction of common descent is even in these cases preserved as has been so well insisted upon by Maine The man who thus takes a share of another s land is called *bhunbhai* or earth brother and if a landowner of a gens other than that of the original owners is asked how he acquired property in the village his invariable answer is *bhai karke basaya* they settled me as a brother

183 But it is not only by fictitious relationship that strangers have obtained admission into *thapas* In some cases the pressure of the troublous times which were so frequent in former days have in duced two weak groups of adjoining villages to unite for common defence And still more frequently people settled originally as culti

vators have, by the lapse of time or by the dying out of the original owners, acquired proprietary rights Village boundaries were before our times by no means so well defined as they are now, as is shown by the boundaries often zig-zagging in and out of adjoining fields held by different villages, and by contiguous villages sometimes having their lands intermixed Boundaries, where they lay in uncultivated land held by villages of the same tribe, were probably almost unknown, for even now the cattle graze in such cases almost independent of them

184 It was, and is still a common custom to settle cultivators in a small outlying hamlet (*garhi* or *májra*) in the village area to cultivate the surrounding land, and the old maps and papers show that it was very much a matter of chance whether, when we made a survey and record of rights in land, these were marked off as separate villages or not I have shown in §§ 240 and 241 *infra*, that we confused cultivating possession and consequent liability for revenue with proprietary right, and when these small hamlets were held by cultivators of a different caste from those of the parent village, they were generally marked off and declared to be their property This is particularly the case with Rors It will be noted (Map No VI) that many small villlages of this caste are dotted about among the Rajputs of the Nardak These were originally small communities settled by the Rajputs as cultivators in their lands to assist them to bear the burden of the Government demand, and even in Panipat, where the Rors are far stronger than in Karnal, they have, almost in every instance, been similarly settled by former Gujar inhabitants, of whom a few families still remain in many villages as the sole representatives of the old owners Brahmans, too, have acquired land in many villages by gifts made in the name of religion

185 Imperial Thapas—The *thapas* above described are those based upon tribal organization, and are still recognized by the people But the Imperial revenue system, in adopting the tribal *thapa* as one of its units, somewhat modified its constitution The revenue was primarily assessed and collected by the local *ámil*, an Imperial authority But he worked principally through the *chaudris* or local heads of the people, who represented large sub-divisions of the country, based, as far as possible, upon tribal distribution Thus *chaudris* existed in old days at Jundla, Panipat, Bala, and other places, and received an allowance called *nánkar* in consideration of the duties they performed They again worked almost entirely by *thapas*, the assessment being fixed for a whole *thapa*, and being distributed over the constituent villages by the headmen of the villages, presided over by those of the *tíka* or chief village These revenue *thapas* coincided generally with the tribal *thapas*, but they occasionally varied from them from considerations of convenience Old pargana Panipat contained 16½

thapas half Jaurasi having been separated by Farrukhsir as stated in §83 I have shown the revenue *thapas* as recorded in the kanungo s papers of 1750 A D in Map No VII It will be noted that the division into parganas compelled the breaking up of the tribal *thapa* of the Mandhars of the west Nardak which has its head quarters at Dadlana.

186 Division of Tribes into gentes exogamy and endogamy—The above remarks apply to the territorial organization of the tribes But the internal organization of the tribe is still more important as bearing upon its social relations The tribe as a whole is strictly endogamous that is to say no Jat can in the first instance marry a Gujar or Ror or any one but a Jat and so on But every
ts and these gentes are strictly exo
to include all descendants of some
live I have had some doubts whether many of the gentes do not take their pre ent names from the places from which they have spread But I think the reasons against this theory are on the whole conclusive and that the similarity of name which not very unfrequently occurs is owing to the village being called after the gens and not the gens after the village Of course local nick names (*al b ong*) are often given and these may in some cases have eventually obscured the original gentile name Traces of phratries as Mr Morgan calls them[1] are not uncommon Thus the Mandhar Kandhar Bargujar Sankarwal and Panihar gentes of Rajputs sprang originally from a common ancestor Lao and cannot intermarry So the Deswal Man Dalal and Siwal gentes of Jats and again the Mual Sual and Rekwal gentes of Rajputs are of common descent and cannot intermarry

187 The fact that many of the gentes bear the same name in different tribes is explained by the people on the ground that a Bach has Rajput for instance married a Gujar woman and her offspring were called Gujars but their descendants formed the Bachhas gens of Gujars This sort of tradition is found over and over again all over the country and in view of the almost conclusive proof we possess (too long to detail here) that descent through females was once the rule in India as it has been probably all over the world I think it is rash to attribute all such traditions merely to a desire to claim descent from a Rajput ancestor It would appear that there are actually Rajput gentes existing sprung from Bhat Brahman and Carpenter fathers and Rajput women At present the off pring of a mixed connection (marriage proper is impossible) take the caste of the father but those of the pure blood will not intermarry or

186 [1] M L 88ff
187 N W I i 105

associate with them Some traces of totemism are still to be found, and, as gentile organizations have almost always been closely connected with totems, it is probable that further inquiry, and especially an etymological examination of the names of the gentes, would greatly extend their number This also would account in many instances for gentes in different tribes bearing the same name Thus, the Jáglán Jats worship their ancestor at a shrine called *Dih*, which is always surrounded by *kaim* trees, and if a woman married in a Jaglan family passes a *kaim* tree, she will cover her face before it as before an elder relation of her husband Again, the Mor Jats will not burn the wood of the cotton plant

188. In my descriptions of the various castes, I give, as far as I am able, the places of origin of the various gentes found in this district But the places I mention are, unless otherwise stated, only the places from which the particular families living in the tract migrated to their present homes, and are therefore only one step backward towards tracing the gens to its original source

189 Exogamy among the Gentes—I have said that every gens is exogamous, that is, that while every man *must* marry into his own tribe, no man *can* marry into his own gens But this is by no means the only limitation imposed upon inter-marriage In the first place, no man can marry into a family, of *whatever* gens it may be, that is settled in his own village, or in any village immediately adjoining his own The strength of this custom is shown by an answer given me, to the effect that the speaker could not marry into a "family of his own gens, even if it lived 100 miles off" The prohibition is based upon "*simjor ki biradari*," or the relationship founded upon a common boundary, and is clearly a survival from marriage by capture This limitation is further extended by the Rajputs, so that no man of them can marry into any family living in the *thapa* into any family of which his father, grandfather, or great grandfather married Thus if a Mandhar Rajput married a Chauhan Rajput of *thapa* Jundla, his son, grandson, and great grandson would not be able to marry any Chauhan of any village in the Jundla *thapa* But beyond this, and the prohibition against marrying within the gens, the Rajputs have no further limitations on inter-marriage Among the other castes the *thapa* is not excluded, but no man can marry into any family of the gens to which his mother or his father's mother belongs, wherever these gentes may be found The Gujars, however, who are generally lax in their rules, often only exclude such persons of these gentes as live in the individual village from which the relation in question came In some parts of Ambala the people are beginning to add the mother's mother's gens, or even to *substitute* it for the father's mother's gens, and this may perhaps be a last stage of the change from relationship through women to relationship through men

The Rajputs

190 The Dehia and Haulania Factions —There is a very extraordinary division of almost the whole countryside south of the Rajput territory into the two factions (*//ap*) of Dehia and Haulánia respecting the origin of which I can obtain no very satisfactory inform ation The Dehias are called after a Jat gens of that name with its head quarters about Bhatgánw in Sunpat having originally come from Bawána near Delhi The Haulania faction is headed by the Ghatwal or Malak Jats whose head quarters are Dher ka Ahulana in Gohana and who were owing to their successful opposition to the Rajputs the ac cepted heads of the Jats in these parts (see § 198 *infri*) Some one of the Emperors called them in to assist him in coercing the Mandhar Rajputs and thus the old enmity was strengthened The Dehia Jats growing powerful became jealous of the supremacy of the Ghatwals and joined the Mandhars against them Thus the countryside was divided into two factions the Gujars and Tagas of the tract the Jaglán Jats of *thapa* Naultha and the Latmár Jats of Rohtak joining the Dehias * the Huda Jats of Rohtak and most of the Jats of the tract except the Jaglans joining the Haulanias In the mutiny dis turbances took place in the Rohtak district between these two factions and the Mandhars of the Nardak ravaged the Haulanias in the south of the tract And in framing my zails I had to alter my proposed division so as to separate a Dehia village which I had included with Haulanias and which objected in consequence The Dehia is also called the Jat and occasionally the Mandhar faction Even Sir H Elliott seems to have been unaware of the existence of these factions[1] The Jats and Rajputs seem independently of these divisions to con sider each other tribally speaking as natural enemies and I have often been assured by Jats though I do not believe it that they would not dare to go into a Rajput village at night

191 The Rajputs —I will now briefly describe the principal tribes of the tract and will begin as in duty bound with the Raj puts *It is hardly necessary to say much about their well known* tribal characteristics They are fine brave men and retain the feudal instinct more strongly developed than any other non menial caste the heads of the people wielding extraordinary authority They are very tenacious of the integrity of their communal property in the village land and seldom admit strangers to share in it The Nardak con tributes many soldiers to our army They are lazy and proud and look upon manual labour as derogatory much preferring the care of cattle whether their own or other people s In the canal and Khadir parts they have abandoned pastoral for agricultural pursuits but even here they will seldom if ever do the actual work of ploughing

It aid w th what truth I know n f th t the Bal n d S lk l an J ts of th D b j d the D h nd th t th Tag f th D b j d th H l

190 N W P 8 88 126

The Rajputs.

with their own hands, while the fact that their women are kept strictly secluded deprives them of an invaluable aid to agriculture In the Nardak a great part of the actual work of cultivation is done by other castes They are, of course, cattle-stealers by ancestral profession, but they exercise their calling in a gentlemanly way, and there is certainly honour among Rajput thieves Musalman Rajputs are called *Rúnghars* by other castes, and *Chotlkats* by their Hindu brethren, from *choti*, the Hindu scalp-lock, which the Musalman does not preserve But both terms are considered abusive, especially the latter The principal gentes are the Chauhans and the Mandhars

192. The *Mandhárs* were settled in very early days in the country about Samana, for Firoz Shah chastised them, carried off their Ranas to Delhi, and made many of them Musalmans The Safidon branch obtained the villages now held by them in the Nardak in comparatively late times by inter-marriage with the Chauhans And though they expelled the Chandel Rajputs from Kohand and Gharaunda when they first came into these parts, yet the Chandels re-conquered them, and the final occupation by Mandhars coming direct from Kaláyat in Patiala is probably of comparatively recent date They, with the other four gentes mentioned in §185, are descended from Lao, a son of Ramchandar and grandson of Raja Jasrat, and said to be the founder of Lahore[1] Their phratry is called Lachman, after a childless son of Raja Jasrat, Ramchandar having another son of Kush who founded the Kachwáha and Narbán gentes They are of the Suraj Bansi clan Their place of origin is Ajodhia, and Kalayat in Patiala, their head-quarters in these parts

193 The *Chauhans*[1] are all sprung from the original people who settled at Júndla They all claim descent from Rána Har Rai, but as it is improbable that he conquered the country single-handed, and as his followers probably included Rajputs whose descendants are still in possession, this cannot be true At the same time it is probable that the eldest line, in which authority descended from Rana Har Rai, has been preserved in its integrity According to this, 19 generations, equivalent to 475 years, have intervened since the Chauhan conquest, which would fix it at about the time of Behlol Lodi, when the Chauhans of Moradabad took a new departure[2] They are of the Agnikula clan Their origin is from Sámbhar in Ajmir, but Rana Har Rai came from Sambhal in Moradabad, where the family bards still live Many of them are now Musalmans, and the change of religion dates from some generations back They are the highest of the Rajput gentes about here, and some of the Maho-

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192. [1] N W P i, 38, 157
193 [1] N W P 63 ff H T i, 160 ff A S ii, 253 [2] H T i, 163 N W P i, 66

medan members will even marry with their own gens in the neighbourhood The Khuhi Chauhans on the Ganges will do this even when Hindus but they practise second marriage and other abominations They intermarry freely however with all the Rajputs in these parts subject to the limitations already stated

194 The *Tunwars*[1] have almost wholly disappeared from the tract being now chiefly represented by the Rajputs of the town of Panipat They are of the Lunar race

195 The Jats—The Jats are pre eminently the agricultural caste of the tract and with the exception of the Rains Malis and Kambohs who are practically market gardeners are the best cultivators we have A Jat when asked his caste will as often answer *zamindar* as Jat They are a fine stalwart race I measured one at Didwari 6 feet 7 inches high and 42½ inches round the chest He complained that a pair of shoes cost him Rs 1 8 They are notorious for their independence acknowledging to a less degree than any other caste the authority of their headmen They hold several tribal groups of villages but they also own parts of villages almost all over the tract save in the Gujar and Rajput portions The question of their origin is far too large a subject to enter upon here it has been fully discussed by General Cunningham and many others[1] They seem to have held parts of the country about Samana in very early days and as I have already noted (§ 69) that part certainly formed a part of an early Indo Scythian kingdom The Jats of the tract seem to have come partly from the Bágar where they were in force 700 years ago[3] In no case have Jats settled from across the Jamna The Jats are not mentioned as a prominent caste of the tract in Akbar's time and probably gained a footing during the breaking up of the Mughal dynasty when they became an important element in the politics of the time[4] Elliott and Cunningham divide the Delhi Jats into Dese and Pacháde [5] but I can find no trace of this division save that there is a powerful gens called Deswál in Rohtak (see § 199 *infra*) and that the Jats hold a *des* of 84 villages in the Doab The Jats of the tract are almost without exception Hindus Those who have become Musalmans are called *Mule Jats* and are only found in two or three villages and there even are only individual families generally said to be descended from hostages taken in infancy by the Musalman rulers and circumcised by them I note the principal gentes below

194 H T i 137 H 53ff

195 A S ii 54ff 81 Ell 5 7f C n pp Elph pp N W P 130ff H T 233f Ell 45 429 493 217f Ell 217f Ell nd *p m* N W P i 131 318 A S 57

The Jats

196. *Jáglán* sprung from Jagla, a Jat of Jaipur, to whom there is a shrine in Isiana at which the whole *thapa* worships They hold the 12 villages (*barah*) of thapa Naultha, and come from Ludás, in Sirsa or Hissar

197 *Ghanghas* sprung from an ancestor called Badkál, whom they still worship, and who has a shrine in Púthar They hold the *thapa* of Mándi, and come from Dhanana near Bhiwani, in the Bágar

198 *Ghatwál* or *Malak* dating their origin from Garh Ghazni[1], and holding Bawana, where they came from Ahulana in Gohana They hold Ugra Kheri and the villages settled from it, and are scantily represented in this district In the old days of Rajput ascendancy the Rajputs would not allow Jats to cover their heads with a turban, nor to wear any red clothes, nor to put a crown (*mor*) on the heads of their bridegroom, or a jewel (*nat*) in their women's noses They also used to levy seignorial rights from virgin brides[2] Even to this day Rajputs will not allow inferior castes to wear red clothes or ample loin clothes in their villages The Ghatwals obtained some successes over the Rajputs, especially over the Mandhars of the Doab, near Deoban and Manglaur, and over those of the Bagar near Kalanaur and Dadri, and removed the obnoxious prohibitions They then acquired the title of *malak* (master) and a red turban as their distinguishing mark, and to this day a Jat with a red pagri is most probably a Ghatwal

199. *Deswál* who hold Korar, Madlauda, Ataola, Mahaoti, and other villages, and came from Rohtak, where they have their head-quarters in the village of Mandauthi

200 *Katkhar* or *Gahlaur*, perhaps the most powerful Jat gens in the tract, holding the 12 villages (*bára*) of Jaurasi They came from Mot Pali in Hissar

201. *Sandhu* worship Kala Mehar or Kala Pir, their ancestor, whose chief shrine is at Thana Satia in Sialkot, the head-quarters of the Sandhus They hold Gagsina, Khotpura, and other villages, and have come here *viâ* Phul Maharaj in Patiala

202 *Halawat* who hold Babail and other villages and came from Dighal in Rohtak They worship a common ancestor called Sadu Deb

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198 [1] A S ii, 55 N W P i, 133 Ell i, 167, 188, 336ff, 448ff, 507f, ii, 409
[2] Ell i, 187

The Gujars

The difference between a Gujar and a Rajput thief was well put to me as follows —"A Rajput will steal your buffalo, but he wont send his father to say he knows where it is and will get it back for Rs 20, and then keep both the Rs 20 and the buffalo The Gujar will" The local opinion of the Gujar is embodied in the proverb—

Kutta, billi, do,
Ránghar, Gújar, do,
Yih chár na ho,
To khule kiwáre so

"The dog and the cat, two, the Ranghar and Gujar, two If it were not for these four you might sleep with your door open" Again, *Jitte dekhen Gújar, itte deyie már*, or "wherever you see a Gujar, hit him" This character has been enjoyed by them from of old [1] The Gujars are, like the Rajputs, singularly unwilling to admit strangers to property in their villages They are closely allied with the Rajputs, and their possession of parts of the Bangar was probably contemporaneous with that of the Mandhars, parts of whose conquests, such as Kohand, were given them But in the Khadir they have succeeded Afghans in comparatively recent time, save in a very few old villages The principal gentes are—

205a *Rawal*—This gens claims decent from a Rajput called Dhundpal from beyond Lahore, who married a daughter of a Gujar called Ghokar It is part of the Ghokarbansi clan, and takes its specific name from Rúa Sársa near Lahore In one village they told me that the ancestor was a Khokhar Rajput,[1] and this is probably the better form of the tradition This story is curious in view of the close connection between the Rajputs and the Ghakkars of the Panjab, who are at least near relations of the Gujars [2] They settled in Rána Khera, (now Rajápur), but moved thence to Kabri and Kohand, where they held a *bára* of 12 villages, and they also held Bapauli, whence they eventually settled the 27 villages (*satáist*) of the Khojgipur *thapa* in the Khadir They still hold the Khadir villages, but have lost most of those near Kohand

206 *Chokar*—This gens comes from Jewar thapa, beyond Mathra, *viá* Bali Qutbpur, in Sunpat They used to hold a *chaubisi* (24 villages) with Namaunda as their head-quarters, and are probably very old inhabitants They have been to a great degree displaced by Jats

207 *Chamain*—This gens claims descent from a Tunwar Rajput by a Gujar mother, and the real gentile name is said to be

205 [1] Ell iv, 240, and elsewhere

205a [1] N W P i, 99ff [2] Ell *passim* as per index *verb* Ghakkar A. S ii, 22ff, 67, 70ff, 81 H T i, 235, ii, 70

Tunwar *Chamain* being only a local appellation They came from Delhi and settled in Nain and Sutana and the neighbouring villages and are certainly very old inhabitants very possibly having emigrated when expelled from the neighbourhood of Delhi by Sher Shah[1] a few years after the Chauhan settlement They have been largely dispossessed by Rors

208 *Kalsán*—This gens claims descent from Rana Har Rai the Chauhan of Jundla by a Gujar wife They had given them a part of his conquests in the Doab where they are still in great force and they hold a little land in the Chauhan Nardak

209 Other gentes are Cheharwal or Daharwal and Puswal from the neighbourhood of Delhi Bhodwal from Mirat Karháwat from Jhajjar Bang and Katáne from Kaithal Bhonkal from Bagpat Khari from Sirsa Patan *via* Delhi Chauri from Chitran in Hansi and Gorsi from Pehoa They are none of them of any local importance

210 The Rors—I can get no satisfactory information whatever as to the origin of this caste Most of them date their origin from the neighbourhood of Bádli near Jhajjar in Rohtak and there are traditions of a Tunwar Rajput as ancestor They hold a *chaurasi* of 84 villages about Pehoa and a *bara* of 12 villages beyond the Ganges but they have obtained their property in the district almost exclusively by being settled as cultivators by the original owners generally Rajputs and Gujars who have since abandoned their village or died out wholly or in part The Rors while almost as good cultivators as the Jats and assisted by their women in the same way are much more peaceful and less grasping in their habits and are consequently readily admitted as cultivators where the Jats would be kept at arm s length They are fine stalwart men of much the same stamp as the Jats The number of gentes represented in the district is very great almost every Ror village including several and there are no large groups of village held by a predominant clan as is the case with the tribes already described They are strongest along the Rohtak canal where they hold many villages originally possessed by Gujars The principal gentes are—

211 *Jográn* descended from a Chauhan Rajput called Joga by a Ror woman They hold the large village of Korana and came from Kalayat in Patiala *vid* Pundri in Kaithal

212 *Ghantar* from Gurawar in Rohtak and *Kandol* from Anwali in Rohtak These two gentes hold Alupur and neighbouring villages

213 *Khechi* came from Narar Jájru in Jaipur where they are still numerous They hold Ahar &c

The Tagas

214. Besides these there are the Kulánia, Gurák, Maipla, Dumián, Rojra, and Kainwál from Delhi, the Kharangar, Lathar, Jarautia, Dhankar, Khaskar, and Chopre, from Rohtak, the Tharrak, Kokra, Tálse, Dodán, Túrán and Lámia, from Kaithal and Jind, the Kultagria from Thanesar, and the Muál from Bikanir, all of which hold considerable areas in the tract

215 The Tagas.—The Tagas, who must be carefully distinguished from the criminal Tagús of these parts, also of Brahminical origin, are a Brahman caste which has abandoned (*tágan karna*) the priestly profession and adopted agriculture They have Brahmans as their family priests[1] They are all Gaurs, and according to tradition their origin dates from the celebrated sacrifice of snakes by Janamejáya (vulg Jalmeja Rishi, also called Raja Agrcend), which is said to have taken place at Safidon in Jind At that time there were no Gaurs in this country, and he summoned many from beyond the sea (*sic*) Half of them would take no money reward for their services, upon which he gave them 184 villages in these parts, when they decided to take no further offering in future, and became Tagas The others took the ordinary offerings, and their descendants are the Gaur Brahmans of these parts Both retained their division into ten gentes, and are hence called *dasnam* Brahmans[2]

216 The Hindu Tagas still wear the sacred thread, but Brahmans do not intermarry with them, and will not even eat ordinary bread from their hands Many of them are now Musalmans It must not be supposed that a Brahman *now* relinquishing the priestly craft and taking to agriculture will become a Taga, the Tagas were made once for all, and the limits of the tribe cannot now be extended They are, as already stated, the oldest inhabitants of the tract, but are now confined to the parts about Hatwala and Barana The Barana and Sanauli Tagas are of gens Bachhas from Kalwa Jamni in Jind, those of Pundri and Harsingpur, of gens Párasir, from the neighbourhood of Pehoa, those about Hatwala are of the Bharadwaj, Gautam, and Saroha gentes, and come from Sirsa Patan, *viâ* the Khadir to the south of the tract They are, as cultivators, superior to the Rajput, Gujar, and Brahmane, but fall very far short of the Jat and Ror Their women are strictly secluded

217. The Brahmans.—Brahmans hold only a small area in the tract, there being but few villages in which they have acquired any considerable share But they own small plots in very many villages, being, for the most part, land given to family priests (*parohits*) by their clients (*jajmáns*) as religious offerings (*pun, dán*) They are vile cultivators, being lazy to a degree, and they carry the grasping and overbearing habits of their caste into their relations as land own-

215 [1] N W P 106ff H T i, 67f [2] A S ii, 6ff

ers so that wherever Brahmans hold land disputes may be expected The local proverb goes *Bahman se bura Lagar se kal* As famine from the desert so comes evil from a Brahman The great mass of the Brahmans of the tract are Gaur [1] Some of them belong to the Chaurasia sub division who assisted at Janamejaya s holocaust of snake (see Tagas *supra*) and received a gift of a chaurasi of 84 vil lages They are considered inferior to the Gaurs There are also a few Sársut Brahmans who are said to be far less grasping and quar relsome than the Gaurs and are certainly less strict in their caste habits so that Gaurs will not eat ordinary bread from their hands The most common gentes are the Bharadwaj Bashista Gautam Bachhas Parasir and Sandlas

218 The Brahmans have in almost all cases followed their clients from their original abodes to the villages in which they are now settled They hold so little land that I have made but few in quiries about them But there are two tribes of Brahmans which though they own no land at all are of such special interest that I mention them separately especially as I do not find any but the most cursory mention of them in any books to which I have access

219 The Gujrati and Dakaut Brahmans —Offerings to Brahmans are divided into *bar* or *graha* for the days of the week and two *grahas* for Rahu and Ket
attacking the sun and moon
who when sitting at dinner wit
of the gods instead of the wine of the jins The sun and moon told of him and Bhagwan cut him into two parts of which Rahu includ ing the stomach and therefore the nectar is the more worthy When any body wishes to offer to Brahmans from illness or other cause he consults a Brahman who casts his horoscope and directs which offer ing of the seven *grahas* should be made The *grahas* are most com monly offered during an eclipse that to Rahu being given at the beginning and that to Ket at the end of the transit The Gaur Brahmans will not take any black offerings such as a buffalo or goat iron sesame (*til*) or *urd* black blankets or clothes salt &c nor oil second hand clothes green clothes nor *satnája* which is seven grains mixed with a piece of iron in them these belonging to the *grahe* whose offerings are forbidden to them An exception however is made in favour of a black cow

220 The *Gujrati* or *Bias* Brahmans who came from Gujrat in Sindh are in some respects the highest class of all Brahmans they are always fed first and they bless a Gaur when they meet him while they will not eat ordinary bread from his hands They are fed on the 12th

217 N W P i 102 149 H T i 66ff N W P i 303 321

day after death, and the Gaurs will not eat on the 13th day if this has not been done But they take inauspicious offerings To them appertain especially the Rahu offerings made at an eclipse They will not take oil, sesame, goats, or green or dirty clothes, but will take old clothes if washed, buffaloes, and satnaja They also take a special offering to Rahu made by a sick person, who puts gold in ghi, looks at his face in it, and gives it to a Gujrati, or who weighs himself against satnaja and makes an offering of the grain A buffalo which has been possessed by a devil to that degree that he has got on to the top of a house (no difficult feat in a village), or a foal dropped in the month of Sáwan, or buffalo calf in Mág, are given to the Gujrati as being unlucky No Gaur would take them Every harvest the Gujrati takes a small allowance (*seori*) of grain from the thrashing floor, just as does the Gaur

221. *The Dakauts*[1] came from Agroha in the Dakhan Raja Jasrat, father of Ramchandar, had excited the anger of Saturday by worshipping all the other *graha* but him Saturday accordingly rained fire on Jasrat's city of Ajodhia Jasrat wished to propitiate him, but the Brahmans feared to take the offering for dread of the consequences, so Jasrat made from the dirt of his body one Daka Rishi who took the offerings, and was the ancestor of Dakauts by a Sudra woman The other Brahmans, however, disowned him, so Jasrat consoled him by promising that all Brahmans should in future consult his children The promise has been fulfilled The Dakauts are pre-eminent as astrologers and soothsayers, and are consulted by every class on all subjects but the dates of weddings and the names of children, on which the Gaurs advise They are the scape-goats of the Hindu religion, and their fate is to receive all the unlucky offerings which no other Brahman will take, such as black things and dirty clothes Especially they take the offerings of Wednesday, Saturday and Ket They are so unlucky that no Brahman will accept their offerings, and if they wish to make them, they have to give them to their own sister's sons No Hindu of any caste will eat any sort of food at their hands, and at weddings they sit with the lower castes, though of course they only eat food cooked by a Brahman In old days they possessed the power of prophecy up to 10-30 A M, but this has now failed them They and the Gujratis are always at enmity, because, as they take many of the same offerings, their interests clash

222 The Saiyads —The principal Saiyads are those of Barsat, of the Zedi branch, and descended from Abul Farah of Wasat in Arabia, who accompanied Mahmud Ghaznavi, and, settling first at Chhat Banur in Patiala and then at Sambhal Heri in Mozaffarnagar, was the ancestor of the Chatrauli Saiyads The Saiyads of Saiyadpur and

221 [1] N W P i, 88 Gloss 120

Jál Pahar are Huseni Saiyads the former from Mushad in Arabia the latter from Khojand near Khorasan The Faridpur Saiyads are Musaví from Qazwín in Persia. All belong to the Bára Saadat who played such an important part in the latter days of the Mughal Empire[1] There is also a large community of Saiyads at Barás descended from Shah Abdál from Chist who assisted Sikandar Lodi at the siege of Narwar and obtained a grant of part of the village They have an old MS family history of some interest The Saiyad is emphatically the worst cultivator I know Lazy thriftless and intensely ignorant and conceited he will not dig till driven to it by the fear of starvation and thinks that his holy descent should save his brow from the need of sweating At the best he has no cattle he has no capital and he grinds down his tenants to the utmost At the worst he is equally poor dirty and holy He is the worst revenue payer in the district for light assessment means to him only greater sloth I have known a Saiyad give one third of the yield of a grain field to a man for watching it while it ripened and if his tenants rent is Rs 10 he is always glad to accept Rs 5 at the beginning of the season in full payment

223 Miscellaneous and Menial Tribes—*Gadis*[1]—The chief land owning tribe left undescribed is the Gadis almost always Musalmans who eat from the hands of almost the lowest castes They are mostly of the Sarohe gens and come from the Bagar or from the Ambala district where they are very numerous They are very bad cultivators

224 *Kambohs*[1] *Rains and Mális*—The Kambohs who are the very best cultivators possible also come from the Ambala district where they have flocked in from Patiala and settled in great numbers The Rains and Malis who practise market gardening are chiefly settled in the towns where they cultivate as tenants

225 *Bairagis*—The Nimáwat Bairagis of Goli Wazsri and Harsingpur the Ráma Nandi Bairagis of Sita Mai and Bhandari and the Radha Balabhi Bairagis of Barana and Matnauli own a good deal of land Besides the monks (*sadhu*) of the monasteries (*asthal*) whose property descends to their disciples (*chela*) who are called their *nadi* children many of the Bairagis have married and become *gharist* and had descendants by procreation or *bindi* children thus forming a new caste This latter class is drawn very largely from Jats The monastic communities are powerful are exceedingly well conducted often very wealthy and exercise a great deal of hospitality

226 *Shekhs*[1]—Of Shekhs proper (Arabs) the only representatives in the tract are the Qoreshi Ansáris and Muhájarín (Malhdum

222 N W P 11f 96f Ell ndex, c b Barha S y d Ell 460f
223 N W P 1 0
224 N W P 304
226 N W P 185 187

Miscellaneous and Menial Tribes

zadah) of Panipat (see §§ 577, 578 *infra*) But every low caste convert to Islam calls himself a Shekh, and such Shekhs are known in the Tract as *sidqi* There is even a Mandhar Rajput Musalman family in the town of Karnal, which has taken to weaving as an occupation, and is called Shekh instead of Rajput The Mandhars visit them, but will not intermarry But the most remarkable Shekhs are a menial caste of that name, which is represented in almost every village by one or two small families, and from which the village watchmen have been almost exclusively drawn from time immemorial The people say that it was the policy of the old Emperors to have some Mahomedans in every village, and that they therefore appointed and settled these people, and the story is not improbable

227 *Jogis*—There is a caste called *Jogi*, generally Hindu, which is one of the lowest of all castes, and receives the offerings made to the impure gods (§ 355) They are musicians, and practise witchcraft and divination They must be carefully distinguished from the *Kanphate Jogis*, or monks of Shiv, who are a sect of religious devotees and not a caste at all, and in fact do not marry

228 *Menial Castes*—The menial castes (*kamins*) only hold land in the rarest possible instances—only in three villages, I think, in the whole Tract Their place in the village community is fully described in the next chapter (§§ 283 to 293 *infra*) They are principally distinguished by their elaborate caste organization, which is so complete that their disputes seldom come into our courts The heads of most of the communities live at Panipat, except that of the washermen who lives at Barsat They are called *khalifa* for the tailor, *raj* for the mason, *mistri* for the carpenter and blacksmith, *mahtar* for the sweeper And if you wish to be polite to any of the members, you address him by the corresponding term, just as you call a landowner *chaudhri* after the *chaudhri* or headmen of village groups, as a London street-boy will call a subaltern Captain or a Scotchman Laird, and as Artemus Ward called a London policeman Sir Richard These people have so little concern with my work, save in their menial capacity, that I have made no inquiries into their tribal and social organization But there does not exist a more interesting field for investigation, especially as many of them are almost undoubtedly aborigines, and a knowledge of their customs would throw great light upon the whole question of the origin and migration of Indian tribes I may mention that the sweepers worship a god called Lal Beg, a small shrine being erected in the yard, with a *ghara* sunk in the ground for him to drink out of They give him sweetened rice on Holi, and at Diwali sacrifice a white cock to him, and they burn lamps to him on Thursday night They do not worship any of the other gods except at weddings, and then only after Lal Beg They also hold a festival in honour of Bála Shah on the 10th of Jet, at which they balance on their fingers long poles with bundles of feathers at the top

Social Intercourse among Tribes

229 Social Intercourse among Tribes —Broadly speaking no superior tribe will eat or drink from the hands or vessels of an inferior one or smoke its pipes But the reputed purifying influences of fire especially as exercised upon *ghi* and sugar and the superior cleanliness of metal over earthen vessels are the foundation of a broad distinction All food is divided into *pakki roti* or fried dry with *ghi* and *kachchi roti* or not so treated Thus among the Hindus a Gujrati Brahman will eat *pakki* but not *kachchi roti* from a Gaur a Gaur from a Taga any Brahman or Taga from a Rajput any Brahman Taga or Rajput from a Jat Gujar or Ror Excepting Brahmans and Tagas each caste will drink water from a metal vessel if previously scoured with earth (*manjna*) and will smoke from a pipe with a brass bowl taking out the stem and using the hand with the fingers closed instead from the same people with whom they will eat *pakki* bread but they will not drink or smoke from earthen vessels or use the same pipe stem except with those whose *kachchi* bread they can eat Jats Gujars Rors Rahbáris (a camel grazing caste) and Ahírs (a shepherd caste) eat and drink in common without any scruples These again will eat a goldsmith s *pakki* bread but not in his house and they used to smoke with carpenters but are ceasing to do so Musalmans have lately become much less strict about these rules as governing their intercourse among themselves and many of them now eat from any respectable Musalman s hand especially in the cities And subject strictly to the above rules any Musalman will eat and drink without scruple from a Hindu but *no* Hindu will touch either *pakki* or *kachchi* from *any* Musalman and will often throw it away if only a Musalman s shadow falls upon it partly perhaps because Musalmans eat from earthen vessels which no Hindu can do unless the vessel has never been used before This affords an easy mode of telling whether a deserted site has been held by Musalmans or Hindus If the latter there will be numbers of little earthen saucers (*rikábis*) found on the spot Brahmans and Rajputs will not eat from any one below a Jat Gujar or Ror while these three tribes themselves do not as a rule eat or drink with any of the menial castes and the following castes are absolutely impure owing to their occupation and habits and their mere touch defiles food —Leather maker washerman barber blacksmith dyer (*chhimpi*) sweeper *dum* and *dhanak* The potter is also looked upon as of doubtful purity The pipes of a village being often left about in the common rooms and fields are generally distinguished by a piece of something tied round the stem—blue rag for a Musalman red for a Hindu leather for a *Chamár* string for a Sweeper and so on so that a friend wishing for a smoke may not defile himself by mistake.

Gur and most sweetmeats can be eaten from almost any body s hand even from that of a leather worker or sweeper but in this case they must be whole not broken

CHAPTER VII—THE VILLAGE COMMUNITY.

230. Constitution of the Proprietary Body—The proprietary body proper, which forms the nucleus round which the subsidiary parts of the community are grouped, includes all those who have rights of ownership in the common land of the village It is seldom *wholly* confined to one single family, strangers having almost always obtained admission in some one or other of the ways indicated in §§ 182, 183, and very often the community will consist of two distinct tribes or gentes of the same tribe, holding more or less equal shares in the village

231 The community, however constituted, is almost always sub-divided into wards or *pannas*, each *panna* embracing a branch of the family descended from some common ancestor, and perhaps strangers settled by that branch, if not sufficiently numerous to constitute a separate *panna* of themselves The word *panna* is also the local term for a lot (*panna marna*, to cast lots), and is almost the only relic I have been able to discover of the old custom of periodical re-distribution of land which seem to have once been so common in Aryan communities * These *pannas* are very commonly again sub-divided into *thulas*, which are also based upon community of descent

232. The village is represented by a certain number of headmen (*lambardárs*), generally one or more for each *panna* or *thula*, according to size, and these again are assisted by *thuladars*, a kind of assistant headmen who are not officially recognized The headman has a considerable discretion in the choice of his *thuladars*, but the latter must be so chosen as fairly to represent the various geneological branches of the community The *thuladars* are called by the Jats in the south of the Tract, *lathayts*—a word which, I am sorry to say, originally means a quarrelsome fellow The headmen and *thuladars*, together with such men as have gained

* In 1841 the Board of Revenue wrote —"The Board are aware that, in the villages of Delhi proper, some of the fields remain unchanged from year to year and from generation to generation, but that some parts of the land are common fields, divided anew among the people year by year, and of which the shape and size are liable to continual changes If this be the case in Hodal (Gurgaon) that should be looked to, and the common field marked as such Mr Grant is now engaged in revising the field maps of Delhi with a view to the correction of this error " The holdings in the sandy parts of some villages are still periodically re distributed, but this is a good deal because the wind effaces the boundaries, and makes them difficult to trace The uncertainty of the yield, moreover, is one of the causes of the re distribution, according to the people themselves

Village Headmen

influence by age or ability constitute the *panch* or village council—*an institution which though no longer recognized by us still* exercises considerable authority is generally appealed to in the first instance and successfully settles a very great number of disputes

233 Village Headmen—It appears from the old records that in former days there was one headman for each *panna* They had enormous authority the distribution of the revenue being wholly in the hands of the *thapa* and village councils of which they formed the hereditary heads Their office was hereditary though fitness was an essential and the next heir would be passed over if incapable in favour of another member of the same family When we acquired the Tract the same arrangement was perforce continued for many years as no record of individual rights or liabilities existed But unfortunately the hereditary nature of the office and the authority which should attach to it were lost sight of All the leading men of the village were admitted to sign the engagement for the revenue and all that signed it we called headmen The allowance (*pachotra*) which is given to these men took the form of a deduction from the last instalment of revenue if paid punctually and was divided by all the engagers in fact it is even said that all the owners shared it proportionally and that it practically took the form of a mere abatement of revenue in which the whole community had a common interest

234 In 1830 a field to field record had been introduced and an attempt was made to limit the number of headmen *it being ruled* that the people were to elect fresh headmen every year who alone were to enjoy the allowance The Collector of the time regretted the change He writes in 1831 — The great objection to the new arrangement is that it is calculated to destroy the strong and honourable feeling of mutual good will and attachment which formerly characterized the intercourse *of the headmen or sharers with the other classes of the community* The support and assistance which the elders had it in their power to afford to the lesser cultivators ensured their respect and obedience and consequently the peace and good order of the society The power they possessed was considerable and so far as the interests of their own village were concerned was scarcely ever abused The words in italics show the light in which these innumerable headmen were then looked upon The other members of the proprietary body were called *rayats* or cultivators and we find the Supreme Government asking for an explanation of the fact that some of the reports submitted seemed to imply that they too possessed a proprietary interest in the land If his words were meant to apply to the state of things during the first summary settlement I think the Collector took too favourable a view of the relation between the people and

their headmen—see § 127 *supra*, and I could give many similar instances The plan of having a new election of headmen does not seem to have been, in its integrity, carried into effect, but up to the settlement of 1842 the number of headmen was still inordinately excessive We find a village paying Rs 14,000, with 76 headmen, another paying Rs 3,500 with 21, a third paying Rs 5,500 with 23, and so on In 1839 the Collector wrote that the matter had been "a continual fester for years"

235 At the settlement of 1842 the Settlement Officer was directed to reduce the numbers largely, taking as a general standard one headman for every Rs 1,000 of revenue He found that among the crowd of so-called headmen there were generally some who had enjoyed the office, either personally or through their ancestors, for a considerable period These he selected, and, as far as possible, gave one headman at least to each sub-division of a village At present there are 1,123 in the Tract—not an excessive number on the whole But the distribution is very unequal, villages with eight or ten headmen are not uncommon, and as each man often pays in only two to three hundred rupees of revenue, the allowance of 5 per cent is, in such cases, quite insufficient to give any standing to the office

236. I believe that the headmen, as a rule, make some small illegal profits from their office, as they seem to consider any small savings from the *malba* fund as their perquisite But I think the money so appropriated is very small in amount, and the practice is, I believe, tacitly recognized as unobjectionable by the people The only wonder is that cases of serious embezzlement are not more common The mass of the people are quite illiterate and careless, and ignorant of their recorded rights They seldom know the area of their holdings or the amount of revenue due upon them, while the half-yearly accounts are, as a rule, Hebrew to them, and so long as they have not to pay very much more this year than they paid last, they are content to accept the total without too curious inquiry into the details Of course there are many exceptions Jats are, as a rule, much less disposed to trust implicitly in their headmen than are other castes, and in some villages every item in the accounts is subjected to the most rigid scrutiny But, as a rule, either the village headmen or the village accountant, or both together, have money-matters completely in their hands While the headmen have thus very great power, our system has in a great measure deprived them of authority, and of the responsibility which attaches to it and which is the best surety for rectitude Yet the good faith which, I do most firmly believe, governs the mass of the people in their relations with one another, is apparent in this matter also I have had very numerous petitions for audit of accounts, either from malcontents who wanted to get the headman into trouble and selected this as the easiest mud to

fling and the hardest to wipe off or from people who were startled by the enhancement of local and patwari cesses the increased expenses incident upon survey and the like The investigation is always com plicated and I have always personally satisfied myself that it has been thorough yet in only two cases I think have I found that the headmen had taken more than what might be called legitimate per quisites

237 The village headmen enjoy certain privileges by virtue of their office Thus they and their heirs apparent are exempt from the duties of village watch and ward (*thikar* § 297 *infra*) They have very generally a *Chamár* attached to each as a personal attendant without payment further than his midday meal and the body of *Chamars* generally have to give a day s work in the fields of each though as they expect to be feasted on the occasion the service is more of an honour than a profit to the recipient.

238 The right of succession runs in the eldest male line and the right of representation is universally recognized the deceased elder son s son taking precedence of the living younger son though the form er may be a minor and a substitute may have to be appointed to do his work

239 Tenures and Village Property —The villages of the Tract have for the purposes of settlement been classified as follows — 64 held wholly in common by the body of owners (*zamindari*) 22 divided among the several branches of the community according to ancestral shares (*pattidari*) and 250 held in severalty by the individual households the holding of each being quite independent of any fixed scale (*bhayachara*) But this classification is practically meaningless Of the 64 zemindari villages 44 are held by the Skinners the Man dals or purchasers from them 9 are small uninhabited plots of land belonging to larger villages but having separate boundaries of their own and 8 are on the river edge where the uncertainty of the river action renders the joint stock tenure the only one which can ensure individual proprietors against serious loss or utter ruin Of the 22 *pattidari* villages 7 are small uninhabited plots of land as above and 4 are subject to river action while in most of the remainder the pro perty of individual households is regulated by possession and not by shares though the several main branches of the community have divid ed the village by shares On the other hand in the 250 *bhayachara* villages though the common land has not yet been divided according to shares yet the interest of the several branches of the community in that land is strictly regulated by ancestral shares in a very large number if not in a majority of instances The fact is that a village may have four or five *pannas* with two or three *thulas* in each there may be common land of the village of each *panna* of each *thula* and

of two or more *thulas* and *pannas* jointly, the scale of separate interests in each varying in its nature from one to another, and each single family holding by possession and not according to shares, so that it is, as a rule, impossible to describe the tenure of a village in a word, or to classify it satisfactorily under the recognized headings

240. I think there can be but little doubt that, till the English rule, individual property in land, in the sense in which we understand it, was unknown in the Tract Each village held the area surrounding its homestead, the dividing boundaries being hardly defined Land was plentiful, cultivators were scarce, almost any body was welcome to break up as much as he could cultivate, and the owner who induced a tenant to settle and bear a share of the burden of the revenue conferred a benefit on the community at large The distinction between the members of the proprietary body and mere tenants holding from them was of course carefully preserved, the latter having no voice in the management of the village, and making formal acknowledgments of their subordinate tenure, but, as will be presently seen, so far as actual burdens were concerned there was practically no distinction between the two classes The land was carefully divided according to quality so that each should have his fair share, and "the same rule was observed when a new comer was admitted to cultivate" The long dividing lines at right angles to the contours of the country which mark off the valuable rice land into minute plots and the inferior sandy soil into long narrow strips including a portion of each degree of quality, and the scattered nature of each man's holding, still show how carefully this was done The revenue was then distributed equally over ploughs, or, when a survey had been made, over cultivated areas, and as it absorbed all the margin that was left after supporting the cultivator, rent was unknown, all cultivators alike paying the demand upon the areas which they cultivated The ancestral shares of each household of the landowning community were carefully observed, and regulated the interest of each in the common lands, and perhaps the adjustment of the minor village accounts, but the area of land held by each in cultivating possession varied with its ability to cultivate, rather than with its rateable share in the village But the idea that the plot of land so held by each was his own to do what he pleased with was utterly foreign to the idea of the people Sales of land were unknown, and when an owner became, from failing appliances, unable to cultivate as much as formerly, the community arranged if possible for the cultivation of the abandoned fields, while he remained responsible for the revenue of only so much land as he actually held

241. When we first made records of rights in land, our primary object was to obtain a record of liability for revenue which depended wholly upon cultivating possession But we went further than this

Tenures and Village Property

We of course preserved as a rule though not always with entire success the *distinction between owner and tenant* but instead of recording each constituent household of the proprietary body as entitled to a fractional share in the village and *as holding in cultivating possession* the land cultivated by its members or by tenants whom they had settled we recorded and treated it *as absolute owner* of this and other land occupied by tenants which they had settled and entered as common property of the village only such land as was either uncultivated or was held by tenants who had been settled by the village in general or by one of its sub divisions The proprietary rights so recorded are now of course indefeasible. But I believe such property in severalty based solely upon actual possession to have been entirely a creation of our own that before our times the breaking up of land gave the cultivator a right to hold that land undisturbed so long as he paid the revenue on it but gave him no further rights and that it gave him this much whether he was an owner or not In old days members of the proprietary body returning to the village after an absence of even half a century or more were admitted to their rights without question and there is still a strong feeling against
absence from the village. In every
mind in which cultivation dates from
regulated by shares and not by possess
and pay revenue on areas quite independent of their shares In families owning land jointly the *property* in it is strictly regulated by shares though as of old the land is often divided for cultivation between the various members according to the extent of the appliances at the disposal of each without regard to those shares each man paying revenue on the land he actually cultivates and taking the whole of its produce But this division does not confer any proprietary right in the land so held Theoretically each household in a village is entitled to break up common land in proportion to its proprietary interest in it But as a fact the area so broken up depends entirely upon the ability to cultivate and the man who breaks it up has a right to hold the land so long as no complete proprietary division is made though he acquires no individual property in it And the whole history of tenant rights as sketched in §§ 257 and 258 points to the same conclusion Finally the general voice of the people who have now quite accepted the new order of things and have no wish to disturb it or to revert to the old order affirms this view of the case and in the Mandal Tract where no record was framed till 1847 there can be no mistake about the matter In short wherever we have not *interfered* by a record to confuse cultivating possession and absolute ownership the people carefully distinguish the two tenures and the distinction is one which I am anxious to insist upon as the courts often show a tendency to assume that cultivating possession is adverse and can become proprietary right by lapse of time This I do not believe to be the

The Family

case, though, till a complete division of property is made, the possession cannot probably be disturbed The erecting the cultivating sharers into separate owners probably worked but little injustice, but it was, I believe, founded upon a mistake The old correspondence bears copious testimony to the universal recognition of fractional shares as a "theoretical" scale of property, though it comments upon the discrepancy between this scale and the actual holdings, which it always talks of as proprietary

242. The present state of affairs, then, is this The fractional shares of the whole village and of the chief sub-divisions of the village to which each main branch of the community is entitled are still recorded in the papers, and very generally measure their interest in the common land But the internal distribution of property in the common land between the constituent households of each main branch is almost always regulated by the areas held in severalty Even when the holdings in severalty regulate the primary division of the common land also, which is most often the case in villages held by two or more different tribes, who can, of course, have no ancestral scale of rights, the recognized shares which used to measure the rights of each are very often recorded in the papers of last settlement, though it is at the same time recorded that they are no longer acted on And instances are by no means uncommon where the wards of a village, in the face of a distinct record that their rights are proportional to their holdings in severalty, have yet, at division, reverted by consent to the old shares, although the reversion involved a loss to one or other of them

243. The Family.—The land owned in severalty by individual families is not only inherited, but is also invariably divided, on the occasion of separation of property, in strict accordance with ancestral shares The members of the family often divide the land among themselves for convenience of cultivation more in accordance with the appliances at the disposal of each than with the proprietary shares, just as the common land is allotted to the various families on a similar scale But this division is not a division of property, and the right of the members to a re-distribution according to shares, with due regard to the preferential right of each to the land he has cultivated so long as it does not exceed his share, is always recognized by the people, though sometimes (not often) contested by the individuals concerned All the agnates are called *jaddi* relations All of them in the degree of grandfather, great grandfather, &c, how highsoever, uncle, brother, and nephew or nephew's son, how lowsoever, are called grandfather, great grandfather, uncle, brother and nephew, respectively, the descendants of the common grandfather being called near relations, all other agnates are distant relations, but sister's and daughter's sons, brother's wives, mother, father's mother, father's brother's wives, son's wife, daughter's husband, grandson's wife, and wife, are

also near relations Generations are counted from the great grandfa ther he being in the first the father and uncle in the third the bro ther and first cousin in the fourth generation the great grandchild in the seventh generation and so on

244 The rules of inheritance are as follows —No practical distinction whatever is made between divided and undivided families in fact I hardly ever have heard the word used * First the sons and son s son s by stirpes how lowsoever sons representing their dead fathers In the ab ence of them the widow takes an interest strictly limited to a life tenancy If there is no widow or after her death the brothers and brother s sons how lowsoever inherit by stirpes with re presentation In their absence the mother takes a life interest After these the inheritance goes to the nearest branch in the male line the division at each stage being by stirpes Daughters if unmarried have a claim to maintenance only If property is separately acquired by a son in a divided family during his father s life the father inherits before the brother but separation of interest before the father s death is not allowed and no separate property can be acquired by the indi viduals of an undivided family The father may divide the land for convenience of cultivation but on his death or the birth of another son it will be open to re distribution

245 In attesting the record of common customs the whole countryside has declared that where there are three sons by one wife and one by another all four share equally (*pagband*) But there have undoubtedly occurred instances in certain families especially among the Rajputs of the Nardak where the division has been by wives (*chundiband)* I have been able however to discover no instance in which this division has been maintained after a dispute whether pri vately or judicially settled and I think too much weight must not be given to isolated undisputed instances Where *chundaband* is the rule of division the whole brothers and their representatives succeed to the exclusion of the half blood otherwise there is no distinction between the two All sons whether by original marriage or re marriage (*kareωa*) are on an equal footing no priority is attachable to the sons of any particular wife But if a Rajput Musalman should marry a woman of another caste as they sometimes do especially in the cities the sons do not inherit at all the property going strictly in the tribe

246 A son born less than seven months after the marriage is consummated even though begotten by the husband and one born

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more than ten months after death or departure of the husband, is illegitimate An illegitimate son cannot be legitimised, nor can he inherit A son by a former husband brought with her by a woman on her re-marriage, who is called *gelar* (*gel* together with) if born, and *karewa* if unborn at the time of the re-marriage, inherits as the son of his begetter

247. A member of the family who becomes a monk (*sádhu*) loses his inheritance, but does not do so merely by becoming a beggar (*fakír*) But the disciples of monks inherits from them as their sons

248. The life-interest of widows subsists so long as one is alive, and is shared by all equally But a Musalman widow of another caste has no interest, and a widow who remarries loses all rights even if she marries the husband's brother Pregnancy also destroys their rights, but not mere reputed unchastity Their rights are not contingent upon their living in the husband's village Woman's separate property (*stridhan*) is unknown

249 It is remarkable how wholly, in the minds of the people, the family is represented by its head At the last settlement the name of the head only was recorded as a rule, and the people still think that it is quite sufficient to send their heads to represent them in court or elsewhere This feeling, however, is weaker among the Jats than among other tribes, and they have become notorious in consequence

250 Admission of Strangers into the Family, and Alienation —The great object of these rules is to preserve the family property to the agnates A man without a son, or whose only son has changed his religion, can always adopt (*godna, godlena*), and a widow left sonless can adopt at will, except among the Jats where, unless the husband has selected the boy, the consent of the heirs is necessary But the boy to be adopted must be a brother's son, or if there are none available, a cousin in the male line, and no relation in an elder degree than the adopter can be adopted No cognate can in any circumstances be adopted except by consent of the next heirs, nor can an only child, except among the Rajputs The Brahmans, however, can adopt sister's and daughter's sons There is no restriction as to age, nor as to investiture with the sacred thread, nor that the boy shall be the youngest of the family The adopted son takes as a real son with children born after his adoption If the division is by wives, he takes his share first *per capita* of all the sons, and the remainder divide by *chúndaband* He loses all rights in his original family, and even if his original brothers should die, can only inherit as the son of his adoptive father A second adoption can only take place when the boy first adopted has died, and can be made by any widow who could have adopted in the first instance

Admission of Strangers into the Family and Alienation

251 The ceremony of adoption is as follows —The man seats the boy in his lap (*god*) feeds him with sweetmeats in the presence of the brotherhood and declares that he has adopted him If a woman adopt she gives him her nipple to suck instead of sweetmeats Sweetmeats are in every case distributed to the brotherhood

252 There is a custom called *ghar jawai* which consists in a sonless man settling his daughter s husband (*jawai*) in his house as his heir when he and his son after him inherit on the death of the father without son though if he die sonless the property reverts to the original family and not to his own cognates He retains his rights in theory in his original family though he often abandons them in practice There is no doubt whatever that this custom *did* obtain for many present landowners have obtained their property in this way But the feeling is strongly against it The Jats Rors and Kambohs strenuously deny the right The Rajputs and Gosains say that the son in law does not inherit The Gujars and Bairagis admit that the custom occurs The Brahmans say that the son in law cannot inherit but his son if he has one can I suspect the real state of the case to be that the thing is often done by tacit consent but that probably the next cognates could forbid it The existence of the name as a well known term shows that the custom does obtain in some degree

253 A man may make a stranger of another gens his *bhunbhai* or earth brother if his near cognates consent in which case he gives him a definite share of his land on the spot and the *bhunbhai* loses all rights of inheritance in his original family The ceremony is com plete by public declaration of the transfer and the consent and by the usual distribution of sweetmeats According to Elliott[1] the *bhunbhai* could not formerly dispose of his land but this is no longer the case But some hold that if the *bhunbhai* has no near cognates the land reverts to the family of the donor

254 Under no circumstances except as above mentioned can a landowner make a gift of land out of the cognate community and not even within it except among the Rors and then if the gift is made in the absence of sons and a son is born afterwards it is resumable Small gifts of land as religious endowments are however recognized Wills and bequests are practically unknown In old days sales of land were unknown and even now they are though of course judicially recognized not very common out of the agnatic community The right of pre emption by agnates is universally recognized in the order of right of permanent inheritance and is almost always asserted by summary petition but owing to the uncertainty felt by the people as to the action of the courts and the costliness of an appeal to them against a purchaser who is usually well off is often not pursued to trial

Tenants and Rent in general

receive from year to year such portions of land as their needs may require sometimes from the community but more often from individual members *usually* on the condition of becoming responsible for the corresponding portion of the revenue Occasionally the landlord receives a very trifling amount of rent but more frequently he shares the produce according to agreement and is alone responsible for the dues of the State These tenants are at liberty to give up the land when they please and are removable at the will of the community or landlord All other tenants save those described above could not be ejected so long as they continued to occupy their lands and to pay their share of the Government revenue They shared equally with the owners in the proceeds of the common lands such as the sale of firewood or grass or grazing dues paid by other villages The title of the landlord was preserved by the form of demanding the *sirinah* or one fortieth of the produce when perhaps only a few grains were granted as an acknowledgment of holding the land from a superior or by the tenant paying his share of the village expenses through his landlord or by the landlord s family priest taking his dues from the tenant also These tenants moreover did not claim the rights of sale or transfer but with the abhorrence with which the cultivating class view the sale of land they are on an equality in every essential particular with the landlord The non resident (*pahi*) cultivator even paid only 75 per cent of the revenue which he would have paid had he been resident and bore no share of the village expenses yet he enjoyed equal rights of occupancy with the resident tenant and in fact possessed every substantial benefit in an equal degree with the owner while paying much lower rates The Settlement Officer pointed out that it was chiefly the good faith which all classes of the community preserve in their dealings with each other that prevented awkward claims by tenants to proprietary rights and rendered disputes so very infrequent with respect to property so ill defined As a fact these tenants have in some cases been declared owners by the courts In one case the Chief Court grounded its decision upon the fact that the tenants had always enjoyed a share of the common produce It did not know that such was the almost universal rule throughout the district The Collector of 1831 who had had long and intimate experience of the people and whose report was most interesting and complete discussed at length the apparent hardship to the owner involved in these tenures especially those of non resident tenants and the advisability of recognising his right to rent in some form but he summed up strongly against it as opposed to the ideas of the people and certain to be productive of endless disputes and ill feeling

258 It is curious how slowly this state of things has changed When the revenue absorbed the whole margin left from the produce after supporting the cultivator it was natural that rent should be non

Tenants and Rent in general.

existent In fact revenue was rent, as the use of the terms revenue-free and rent-free as synonymous for lands of which the revenue was assigned shows It was not till about 1850 that Government interfered to limit the demand of assignees of land revenue to the Government share of the produce, and previous to that date they took rent from the owners exactly as if they had been landlords themselves But, as the Government demand was gradually limited to a moderate share of the produce, a margin was left in favour of the producer from which rent could fairly have been taken As a fact, in the Nardak, where the Mandal assignees took rent from owners and tenants alike till 1847, and where the uncertainty of the yield renders it easier for a man without capital to pay a share of the produce than a share of the revenue, because, although the total amount paid is larger, it is paid in instalments which vary with the means of paying it, tenants as a rule still pay a share of the produce (*batai*) But throughout the rest of the Tract, except in the city of Panipat and one or two similar revenue-free villages held by non-cultivating owners, where cash, and still more commonly, grain rents have always been taken, and excepting, of course, the Skinner villages, rent is still almost unknown I know of hardly a single case outside the cities and the villages already mentioned, in which rent is taken from tenants-at-will even whose cultivation dates from last settlement Tenants of later standing, and especially those who have only lately begun to cultivate, often pay rent, in the Khadir, perhaps generally But in a *very* large number of cases they still pay revenue only, and where rent is paid it is generally very much below the competition value of the land (see statement XVI) This state of things is, however, gradually changing The people have awakened to the possibility of demanding rent, a good deal, I think, in consequence of settlement operations, the inquiries attending them, and the new ideas which they have suggested The change is, however, extraordinarily slow Even now the *great majority* of tenants pay no rent, and especially is there a strong feeling in favour of the tenants-at-will of old-standing, in fact the people are inclined to deal more leniently with them than with the occupancy tenants, for the former claim no rights, while the latter do Of course the equal distribution of revenue over the land does, in fact, mean a certain degree of profit to the owners, for they generally hold the best land, so that they pay less for their land in proportion to its value than the tenants pay for theirs, while, on the outlying and inferior portions, the revenue thus distributed, especially in the Khadir, is often a very fair rent for the land

259. The difficulty with which the idea of rent is received is well exemplified in the cultivation of the common land Of course an individual owner cultivating this land is really a tenant holding from the community as a whole But the idea of taking rent from him is, even now, quite beyond the capacity of the people The own-

er who breaks up common land will of course pay such revenue as the method of distribution of revenue in force will allot to it but he has by common custom a right to hold the land free from liability of ejectment until a division is effected and even then the land must be included in his share except in so far as it exceeds the area to which he is entitled This custom is so universal that I think the courts would be fully justified in refusing to eject such a man so long as he paid his revenue Cases have been not infrequent in which the peo ple have at division allowed individual owners to retain the common land which they had broken up even though considerably in excess of their share and it is by no means uncommon for owners to build wells at their own cost in the common land so certain do they feel of the security of their tenure In short as already pointed out in § 241 the conclusion is irresistible that in old times anybody who broke up new land or even who was given old land to cultivate except as an obviously temporary measure acquired a right to hold that land so long as he paid the revenue on it and that whether he were an owner or not The revenue was so heavy that the village was only too glad to get cultivators to accept land on these terms and the explanation of the fact that the people even now fail to dis tinguish between occupancy tenant and tenants at will of any standing is not that old custom failed to raise the ancient tenants approxi mately to a level with owners but that it treated both owners and tenants of all land alike so far as their right of cultivating possession was concerned In 1850 the Sudder Board ruled that the common custom of India gave to the man who reclaimed waste a right to transmit the land to his descendants I believe it is the common custom here but that what he transmits is the right of cultivating possession and not of property

260 Kinds of Rent and other Tenants Dues—Grain rents (*tjara*) are mostly in vogue in the city of Panipat and the few similar villages near it They are usually paid one third in wheat and two thirds in the inferior grains Cash rents are taken chiefly in the Khadir either as a lump sum (*chikota*) or a percentage in addition to the reveuue (*malikana*) or a rate per *bigha* A share of the produce is taken either by actual division (*batai*) or by estimate of the yield (*kan*) The owner takes no share of the fodder except when the grain has failed and only fodder is produced The dues of the Chamars and the allowances of the Brahman and Saiyad are deducted in *batai* before the division is made the dues of other village menials are paid by the cultivator alone Where a share of the produce is taken money rates on area for each staple (*abti*) are generally taken on sugar cotton tobacco pepper most vegetables and spices *methi* and *chari* grown for fodder only as in all except the last two which are purely fodder crops the produce is not collected at one time and spot so that division would be difficult and dishonesty easy

261. The tenants, as a rule, are responsible for providing carts and bedsteads for the use of Government officials But in the villages they pay no other dues In the city of Panipat and the similar villages near it they generally pay many miscellaneous dues (*abwáb*), such as milk, green wheat for fodder, earth for mending houses, dung-cakes, &c , and the Skinners also take many extra cesses, often making their tenants pay all the Government cesses, the lambardari allowance, the patwari's pay, and a levy on account of expenses of management called *kharcha*

262. There are some very curious dues paid in the city of Panipat which, though not actually rent, are paid by purchasers of land to the original proprietor from whom they purchased it, in consideration of certain rights of ownership which did not pass with the sale The principal of these are *haqq raqbah* and *haqq ab* If a man sells his fields, his property in the *daul* or dividing ridges does not pass unless expressly specified, so he takes what is called *haqq raqbah* and is responsible for keeping the ridges in order So again, if the well was not distinctly specified the property in it does not pass, though the soil in which it stands being no longer his, he cannot get near it to use it But he takes *haqq áb*, and it is a disputed point whether he cannot forbid the purchaser to use the well Each of these dues is generally fixed at one-eighth of the rent or owner's share of the produce Again if a man wishes to carry water along another's *daul* he pays *daulánah*—generally a lump payment of 5 to 10 seers a harvest

263. Village Religious Endowments.—In almost every village will be found small plots held on a tenure of religious endowment, (*dohli*) They are chiefly granted to Brahmans and to devotees, to shrines, and to menials on condition of service in shrines, the grantors being usually the village or a sub-division of it, less frequently individual owners The tenure is personal to the grantee, and is resumable at pleasure, though seldom resumed and often continued to heirs It assumes three principal forms The grantors may either cultivate the land and pay the revenue themselves, giving the whole of the produce to the grantee , or they may give the land in inferior ownership to the grantee, paying the revenue themselves , or they may pay the revenue, and allow the grantee to cultivate and take the produce

264 Common Expenditure of the Village.—Every village keeps open-house to the countryside A traveller (*bateo*) who has no friends in the village puts up as a matter of course in the common-room (*chopal* in the north, *paras* in the south) of the village, and receives food and tobacco free , though he will, if possible, choose a village inhabited by his own tribe Every Government servant passing through the village is fed in like manner , and though this custom is a source of considerable expense to villages on the main roads—in one village where I examined the accounts it accounted for four-fifths

of the whole expenses—it is founded upon the feeling of the people and not primarily upon the extortion of the officials Hospitality of this sort is considered a social duty to refuse it is an insult and a village which was grudging in its exercise would have dishonour in the sight of its fellows The people will never take payment for anything supplied by the village as a whole from its own stores such as milk wood and grass and when a headman brings hot milk of a brown colour from an earthen vessel in the pores of which milk has daily gone sour for some months past throws in some sugar from a corner of his not over clean *chadar* in which it has been tied up stirs it up with his finger blows on it to cool it and offers it you to drink it is very difficult to save at the same time your own stomach and his feelings When attesting our records in the

on village business charge their expenses and often perhaps a little more to the village account The village common room the village shrines the drinking well and other public structures have to be maintained and kept in repair and occasionally new ones built Small religious offerings are made on occasion in the name of the village and a menial settling for the first time in the village generally receives some pecuniary help to enable him to start fairly Process fees (*dastakana*) too are levied on the village if the revenue is in arrears All these and similar expenses constitute the common expenditure of the village called *malba* literally meaning refuse sweepings because of the many miscellaneous items which it includes

265 There is generally a Banya appointed as *malbabardár* for the village or a sub division of it and the headmen draw the necessary funds from them the accounts being audited by the community when the half yearly instalment of revenue is collected The old administration papers fixed a very high limit generally 6¼ per cent on the revenue beyond which the headmen could not incur these expenses without the *previous* sanction of the community In the new papers I have inserted the very much narrower limits fixed by Financial Commissioner s Circular No 4 of 1860 The headmen grumble dreadfully for village hospitality accounts for most of the expenses these *must* be incurred and in many of the larger villages the necessary expenses will no doubt often exceed the limits while among the Jats at any rate some of the evil disposed are tolerably certain to object whenever they have an opportunity of making things uncomfortable for the headmen But on the other hand I believe that the headmen used often to make illegitimate profits from the *malba* realising up to the limits fixed without regard to the expenditure I think the limit should have been fixed at an unvarying percentage on the revenue for the expenses

increase if anything rather faster than the revenue with the size of the village, as travellers select large villages to stay in But the headmen will probably be able to recover any really legitimate expenses, and in any case the people will hardly allow the reputation of the village to suffer I have no apprehension of any real difficulty on this score, but if such should arise, I think the limits fixed might be enlarged with advantage It would have been unwise for me to have attempted to procure sanction for their alteration on purely theoretical apprehensions of difficulty, and before they had been fairly tried

266. Common Income of the Village.—The proceeds of the village may be divided into two classes, *first*, are the occasional proceeds derived from the sale or lease of common property, such as the sale of jungle, the lease of pasture to travelling herds of cattle, the sale of the nitrous efflorescence (*rehi*) which abounds in old homesteads for the purpose of manure or the manufacture of saltpetre, the small dues sometimes realized from carts which come for dry firewood, the fine often paid by strangers for permission to collect kino, to cut thatching grass, and the like These are, if of any material amount, generally divided at once among the owners, and the tenants have no share in them If petty, they are paid in to the credit of the general *malba* accounts

267. The *second* class consists of the regular dues, which are included in and collected with the half-yearly revenue account, and in which all revenue-payers, whether owners or tenants, share proportionally The most important head of income is the *kúrhi kamíni* or hearth tax This in collected in almost every village, and the usual annual rate is Rs 2 per hearth, but in small villages, where the common expenses are inconsiderable, it varies with their amount Thus the fact that it has not been collected at all for several years, when other common income has been sufficient to cover the common expenditure, is by no means decisive against the right to collect It is paid *only* by non-cultivators, and *Dakauts*, sweepers, *Dúms*, barbers, and washermen so long as they exercise their calling, are exempt It formed part of the old *chaubachha* or four-fold levy, taken in old days on *púg*, *tág*, *kúrhi*, and *púnchhi*, or the head-cloth of the men, the waist string of the male children, the hearth of the non-cultivators, and the tails of their cattle,[1] and which was often had recourse to to cover losses caused by cultivators abandoning their lands and failing to pay the revenue due on them

268 The courts, up to the Chief Court I believe, have held that this cess is in the nature of a ground rent paid by non-proprietors on account of the land occupied by their houses in the homestead, and that

267 [1]N W P ii, 46

Common Income of the Village

a non proprietor who purchases the land on which his house stands is *ipso facto* exempt from the ces I cannot help thinking that this is a mistaken view and that the real object of the cess is to throw a share of the burden of the ho pitality which is exercised in the name of the village as a whole upon those residents who would otherwise escape all share *in its incidence In the first place in villages inhabit* ed wholly by cultivators such for instance as *gujus* or *mujras* (§ 183 *supra*) and even in the Skinner villages where every levy is taken that can on any pretence be squeezed from the people the hearth tax is appropriated by the cultivators to the common expenses although they have of course no property whatever in the village site Again if a family divides into two households with separate hearths each household will pay the same cess that the joint family paid before though the land they occupy is the same Again the *Chuhra Nat* and *Dum* are exempt simply because they are utterly im pure and no one would accept hospitality at their hands and the washermen are exempt for a similar reason so long as they exercise their filthy calling *Dakauts* are exempt because they are so unlucky that even the grasping Brahman does not accept an offering from their hands not because they are poor for they are generally quite the contrary Again why should the non proprietary cultivator be exempt if the cess is a ground rent On my view of the matter his exemption is reasonable for the hearth tax never nearly covers the expenses and the balance is distributed with the revenue so that he pays his share as a cultivator

269 Besides the hearth tax there are the grazing dues *chugai* or *charai* This is chiefly levied in the Nardak where pasture is exten sive and non proprietors often keep numerous flocks and herds The rate is usually 8 annas per buffalo 4 annas per ox or cow 2 annas per calf and Rs 3 to 5 per hundred sheep or goats The cattle of proprietors and all plough cattle are always exempt and as a rule the cattle of all cultivators graze free This cess when realized in villages with limited pasture is generally taken only in years when the village expenses are very largely in excess of the common income It is a payment in con sideration of the right of grazing on the common lands and must be carefully distinguished from the distribution of revenue upon cattle which is generally adopted in the Nardak villages when a drought has rendered the number of cattle possessed by each a better test of abili ty to bear the burden of the revenue than is afforded by the areas of fields which have produced nothing In this latter case the cattle of owners are of course included Besides these dues there is an annual levy of Rs 2 upon every oil press which is occasionally taken and a small periodical payment is made chiefly in the Nardal by every non cultivator who cuts firewood or *pila* from the common jungles and is usually quoted at Re 1 a year on each axe or bill hook (*gandássa*)

The Distribution of the Revenue

270 The Distribution of the Revenue.—When the half-yearly instalment of revenue becomes due, the *malba* account is first audited The list by which the hearth tax is to be levied is then made out, and, as I have said, this is generally so adjusted as to leave a fair share of the general expenses to be paid by the cultivators who are exempt from the tax The balance so left, after deducting the grazing dues, is added to the Government revenue (*hála*, probably so called because originally distributed over ploughs or *hals*) and cesses, and a distribution (*bachh*) of the whole is then made over the cultivated land

271. This distribution is *almost always* by an all-round rate upon areas The distribution of land according to quality made this method of distrbution fair enough in the first instance, but greater or less inequalities have grown up in most villages, and especially some of our new systems lead to very peculiar results in connection with it, as will be pointed out in detail in treating of the distribution of the new assessment Still the practice has been adhered to with extraordinary unanimity, and payment by shares or by ploughs, or by proportional rates on soils, are the exceptions In some few villages the distribution is made on the area actually under the plough in each year, but as a rule land entered as cultivated at settlement is paid for, whether cultivated or not (*khari pari ka dám dena*) The newly-broken up land, if chiefly in the hands of tenants, is included, and sometimes the original settlement rate per acre is charged on this, with the result of reducing the rate upon the old cultivation When the land has been broken up by owners, it is often not included at all, or not till a considerable area has been broken up, when all land so cultivated up to date is included once for all

272. The headmen then collect (*ugáhna*) the revenue Tenants of any standing almost always pay direct, new tenants often pay through the owners, even when they pay nothing in excess of the sum entered as due on their land in the distribution list or *fard dhal báchh* Many of the well-to-do pay direct from their private purse, and I am happy to say the number that do so is considerable, while it is becoming every day more and more the custom for every one who has the ready money to pay in this manner Those who have not sufficient cash, or who prefer not to pay direct, pay by *tuch*, that is, they give in the name of their banker (*súh* or *sáhúkár*) The patwari then gives each banker a note of the sum due by each of his clients, and the banker pays in the total amount and debits the items in their respective accounts The *malba* account is settled, the revenue is paid, the headmen take their allowances, and the *ugáhu* or collection is at an end

273. The Village Money-lender.—The village banker or *sáhúkár* is a much, and in my opinion generally a very wrongfully-abused

person Rapacious Jews of the worst type to whom every sort of chicanery and rascality is the chief joy of life and in whose hands the illiterate villager is as helpless as a child do exist especially in the cities But they are well known and only had recourse to in the last resort. It is unnecessary for me to repeat what has been so often and so well said about the absolute necessity for an agency which shall furnish capital to a class who are as a rule without it and shall receive the produce of the fields in exchange for the hard cash in which alone Government will receive its revenue But this is not the only function they fulfil The well to villager keeps his whole accounts with the money lender he seldom stores any amount of grain in his house as he has no means of protecting it but makes over to his banker the produce of the harvest and draws upon him for his daily wants The account is precisely similar to that kept by an English farmer with his banker but with this cardinal distinction —that the English farmer starts with a deposit and has as a rule a balance to his credit while the Indian farmer has as a rule nothing to deposit at first and would not deposit it if he had He starts with a credit and however well to do always owes something to his banker If he ha any surplus wealth he as a rule conceals it or sinks it in jewels for his wife till the time comes for a wedding in his family when he will spend the whole of it and an advance from his banker besides He not unfrequently unless really indebted sells his produce to travelling traders at a higher rate than he could get for it in the village and he very commonly lends money himself in a small way to his friends and fellow villagers and is generally exceedingly long suffering in his treatment of them

274 Nor is the banker himself generally so exacting as he is often said to be He charges monthly interest at the rate of a *paisa* in the rupee—18¾ per cent per annum—when his client is a substantial man and from 25 per cent upwards when the credit of the latter is doubtful He credits grain received at a seer per rupee more and debits it at as much less than the market rate But his chances of loss are often great the periods of credit are generally long and at the time of settlement allowances are made and a compromise effected more generally than would be thought possible His loans are often secured by a mortgage (*gehna giri*) but the mortgage is seldom recorded for in most villages it is thought disgraceful to have one s land shown as mortgaged in the Government papers and so long as the client is reputed honest the banker does not press for an entry though it would greatly enhance his security The mortgagor too almost always continues to cultivate the land and generally at a fairly moderate rent It is the city Banya in particular that is often as unscrupulous and rapacious as he can be painted And in one respect our rules favour his knavery It is a universal rule among the people that till the deed of alienation has been registered if registration is necessary and till mutation of names has been effected in

the Government records, the whole of the money is not paid, and possession of the land is not given At the same time, the people believe that registration will not be made unless payment of the consideration in full is admitted, while our rules expressly forbid our ordering mutation of names unless transfer of possession is shown to have taken place Thus the alienator must perforce, in order to complete the transaction, admit full payment and transfer of possession before either has been made, and the alienee, if unscrupulous, withholds the balance due and sues for possession, and the admissions of the alienator, duly recorded, preclude the possibility of defence

275. In time of drought and famine the Banya is the villager's mainstay, without him he would simply starve In fact the function of a Banya in a village is very like that of the air-chamber in a fire engine He receives the produce of the village, the supply of which is fitful and intermittent, stores it up, and emits it in a steady and effective stream And if some power is lost in the process, it is only the cost at which all machinery is worked, for force cannot be transmuted from one form into another and more serviceable one without some part of it being lost on the way

276 Agricultural Partnerships—The whole agriculture of the Tract is conducted by means of *lánas*, which are associations of households or individuals, each contributing oxen, or labour, or both, and the whole *lana* working jointly, and cultivating certain lands of which some of the members of the association have the disposal, whether as owners or tenants The agreements for them are made for the agricultural year, dating from the day after Dusahra, the 11th of the second half of Jet In the Nardak and elsewhere, where the depth of water necessitates a large staff of bullocks, the *lána* often includes seven or eight ploughs of two oxen each, in other places, more often three or four The sharers are called *sájja* (*sájja*, a share), if a man contributes a full plough he is called *ek hal ká sájji*, if a half plough, *káchwa ka sajji*, from *káchwa*, the space in the yoke occupied by the neck of one bullock, if only his personal labour, *ji ka sájji*, or sharer of his person This last class never contribute land, and are generally *Chamárs*, while a man who contributes land is seldom or never a *ji ka sájji* If a woman, not of the family of any of the landed sharers, is admitted, she is called *khurpi ka sájji*, or a sharer of a hoe, and takes half the share of a *ji ka sájji*

277. The distribution of the proceeds and the payment of revenue is conducted in two different methods In all cases the whole of the produce is thrown together, without regard to the yield of individual fields Throughout the Naidak, and generally among Rajputs, the whole number of heads (*áng*) in the *lána* are counted The whole of the fodder and the price of all iron used in the cultivation are divided over the oxen equally The grain is collected, the seed-grain re-

Agricultural Partnerships

paid to the *Bania* with interest and the dues of the *Chamars* and the religious offerings are deducted One fourth of the remainder is then separated as *hakim hissah* or the share of the ruler and this is divided among the people who contributed the land in proportion to the area contributed by each and these people pay each the revenue due on his own land The remainder is then divided upon the heads of men and oxen an ox generally taking twice the share of a man among the Rajputs because the owners provide most of the cattle while many of the men are non proprietors and also in the villages where irrigation is extensive because the cattle there have such hard work For this latter reason an ox sometimes takes twice as much as a man in the spring and only as much in the autumn harvest when there is no irrigation In other villages oxen and men share equally In all cases the costs of cultivation except the iron are divided on these same shares. This system as practically worked by the more well to-do landowners who do not labour with their own hands bears a curious resemblance to that described by Maine as obtaining in ancient Ireland[1]

278 In the second method of distribution the accounts of the *lana* which is also called *ratha* are kept by ploughs each sharer contributing a certain number of half ploughs To make up the number of men required for his oxen a sharer will often take a *jí ká sájí* into partnership but in this case the latter claims from the sharer only and not from the *lana* as a whole in which he is only recognized as a man attached to one of the ploughs The whole costs and proceeds of cultivation and the revenue due on the whole of the land are divided equally over the ploughs without any regard to the area of land contributed by each plough This sort of *lana* is also called *basira* The *jí ká sájí* in this case takes from the man who engaged him one fourth or if there are already two able bodied men on the plough one fifth of the produce allotted to one plough and pays the same proportion of the revenue the division being by heads and men and oxen sharing equally He receives no share of the fodder and pays no share of the cost of the iron or seed Under this system the *jí ká sájí* is entitled to an advance of some Rs 20 to 25 free of interest and further advances at discretion at reasonable rates from his employer His account is seldom cleared off and till it is cleared off he does household work also so that he becomes attached to his master as a sort of serf and if a second employer takes him he is bound to first settle his account with the old employer The debt is looked upon by the people as a body debt (*sarír ká qarzah*) and they hold that they are entitled to compel the man to work till he has cleared it off and grumble much at our law refusing to endorse this view In all cases the *jí ká sájí* is expected to do much of the

277 E I 151 f 155 ff

Agricultural Partnerships

hardest part of the labour, such as ploughing, and they are much more used by Gujars and Rajputs than by Jats or Kors Among the latter the women of the family are often counted and get shares, which the *ji ká sájji's* wife does not

279. There is another *lána* made for the express purpose of cutting and pressing sugarcane The cane is grown in the ordinary manner, but after *Diwáli*, when the cutting time has come, the growers combine and form a *kolhu ka lána*, or sugar mill association, which will consist of 10 or 12 ploughs, and is worked as follows Each sharer (whether an individual or an ordinary *lana*) contributes oxen and grown men in equal numbers strictly in proportion to the area it has under cane, and women and children as near as may be at the same rate, and the account is kept by yokes of oxen (*jot*) The sharers cast lots to determine the rotation (*bári, osra*) in which the work shall be done, one lot for each yoke Thus, if *A*, *B*, *C*, and *D* be the lots, *A* and *D* may belong to one man who contributes two yokes The press must be started on Sunday evening, so on Sunday morning the whole of the labourers begin to cut *A's* cane As the first turn of the season is always a double one, they cut it on Sunday and Monday On Tuesday they cut *B's* cane, on Wednesday *C's*, and so on As each man's cane is finished, he falls out of the rotation The pressing begins on Sunday evening, and all the bullocks work in rotation night and day till the work is done, each yoke going on till the vessel into which the juice first runs (*kundi*) is full, and then being relieved They begin to press the cane cut during the day in the evening of the same day, and it generally occupies the press till the evening of the next day If it takes a little more or less time, the excess or defect is marked by a pat of dung on a rough sundial made by a peg stuck into the ground, and is allowed for when the same man's turn comes round again Each man takes the gur made from his own cane, and pays the daily expenses of his days The joint expenses, such as hire of evaporating pan, making of press, &c, are distributed in proportion to the number of days the cane of each has taken to press

280. This is the ordinary system But the people find that the crowd collected to cut the cane eat and spoil so much that a new system which has come from Rohtak is fast gaining ground In this each sharer cuts his own cane He starts his bullocks and presses his cane till one or two *kundis* of juice, as may have been previously agreed upon, have been expressed He then makes way for another man with his cane and bullocks, and so on When all his cane is crushed, he takes away his bullocks and falls out of the rota Every morning the *gur* which has been made during the past 24 hours and the current expenses are divided in proportion to the number of *kundis* of juice contributed by each

281 *Dangwára* is the name of a system by which two or more owners club their cattle together, either for the year or for a special

The Village Accountant

job The united cattle work for each in proportion to the number of oxen contributed and the partners have no further claim upon one another each keeping his land and its produce and revenue distinct

282 **The Village Accountant** —The patwari is in these parts emphatically a Government servant the *malbabidar* who corresponds to the Punjab *Dharuai* usually keeping the village accounts Among the Nardak Rajputs especially the patwari often knows little of the private arrangements of the community But in the remainder of the Tract the patwari often has the whole matter of the distribution and collection of Government revenue in his own hands Still it is wonderful how many of the patwaris possess the entire confidence *of the villagers No doubt a good deal goes on which we should be* unable to approve of I believe that only exceptionally scrupulous patwaris ever pay their bill with the village Banya the great majority *living free at the expense of the village But I do not think that a* patwari who does so is necessarily corrupt or extortionate. The custom is in consonance with the habits of the people the burden is so widely distributed as to be hardly perceptible and as the whole contribute equally there is no temptation to partiality So long as the patwari is impartial and not too luxurious in his style of living the people are well content to secure at the price the good offices of one who has very much in his hands and are perhaps not sorry to have little entries in Banya s account books which can be brought up against him in case of need and the gratification is continued as a matter of course often probably without being asked for But if he fails in these respects there is trouble Of course where such a state of things is discovered it is necessary to take notice of it but I am not sure that it is always wise to discover it Even if it should tend to *destroy his independence as between the Government and the village*— which I doubt for his appointment rests with Government—it also tends to keep him impartial as between individual villagers and the latter quality is the more important because so much the oftener called into play

283 **Village Menials** —The menials or *kamins* form a very important part of the village community and nothing is thought to be so effective an assertion of the poverty of a village as to say that the *kamins* have left it. They perform all the *begar* or work not paid *for by the job and this includes the sarkari begar or services per* formed free for Government officials when travelling For this they are specially paid and when in 1820 Lord Hastings issued a proclamation abolishing *begar* or forced labour as it was called the *kamins* petitioned the Collector to revoke the obnoxious order as in the Collector s words they were deprived of their only means of subsistence as their services were no longer called for and their allowance no longer paid them This is of course an exaggeration and forced

Village Menials.

labour is sometimes so taken as to be a real injury to the people. But for the ordinary services which the custom of the country prescribes, the givers are fully paid by the cultivators, who, and not the menials, are the people to be considered. The payment as to [illegible] is made either by a share of the produce, or by [illegible] allowance upon the plough or Persian wheel. The [illegible] is done by the various houses in accordance with a *[illegible]* or rotation [illegible] the *thikar* banya (see § 297 *infra*). I briefly describe the [illegible] below.

284. *Chamárs*[1] or tanners or cobblers. They are in these tracts by far the most important class of menials, for, besides their functions as artizans, they perform a very considerable part of the agricultural labour. On the 11th of the second half of Jet, the day after [illegible], when the arrangements for the ensuing agricultural year are [illegible] made, the *lanas* and households agree how many *Chamárs* [illegible] and informs the *thikar* banya (§ 297 *infra*), who distributes the various houses of *Chamárs* among them by lot. Each [illegible] then agrees with its *Chamárs* whether they will be *[illegible]* or *[illegible]*, or *sarkári begár ke Chamárs*. The *kamai* or *[illegible]* *Chamár* ([illegible] to labour, to work at) receives either a twentieth or a twenty-oneth part of the *grain* produced on the *lána*, having no share in any other produce; and for this he provides an able-bodied man to be at [illegible] work in the fields, and makes and mends all the boots and leather articles needed by the *lana*. The *[illegible]* *Chamár* receives a fortieth or forty-oneth part of the grain, and for this he provides a man to work in the fields whenever special work is in hand, [illegible], weeding, harvest, &c. He also gives two pair of boots a year for the ploughman and two for the woman who brings the bread into the fields, and one ox-whip (*narka*), and a leather rope (*[illegible]*) to fix the yoke (*júa*) to the plough, in the half-year, and does all the necessary mending.

The *sarkári begar ka Chamár* takes an eightieth or eighty-oneth part of the grain, and gives a *narka* and *sárta* half-yearly, mends boots, and does Government *begár*. Besides the above dues, the *Chamárs* always have some grain left them on the thrashing floor, called *chhor*, often a considerable quantity.

285. The *Chamárs* are the coolies of the Tract. They cut grass, carry wood, put up tents, carry bundles, act as watchmen and the like for officials, and this work is shared by *all* the *Chamárs* in the village. They also plaster the houses with mud when needed. They take the skins of all the animals which die in the village except those which die on Saturday or Sunday, or the first which dies of cattle plague (§§ 491-92 *infra*). They generally give one pair of boots per ox and two

284 [1] N W P i, 69ff H T i, 391

Village Menials

pairs per buffalo skin so taken to the owner They and the *Chuhras* take the flesh also between them the most usual division being that the *Chamars* take that of cloven footed animals and the *Chuhras* that of whole footed animals and abortions

286 The *Barhi*[1] or carpenter receives a fixed allowance generally 40 to 50 seers per Persian wheel or half as much per plough and a sheaf (*bhar*) and small bundle (*gaura*) of corn the *bhar* yielding perhaps 10 seers of grain and the *gura* half as much For this he repairs all agricultural implements and household furniture and makes all without payment except the cart the Persian wheel and the sugar press The wood is found for him

287 The *Lohar*[1] or blacksmith receives the same as the *Barhi* He makes and mends all iron implements the iron being found him

288 The *Kumhar*[1] or potter gets the same as the *Barhi* when he has to provide earthen vessels for Persian wheels Otherwise he gets 12 to 20 seers per plough He provides all the earthen vessels needed by the people or by travellers and he keeps donkeys and carries grain on them from the thrashing floor to the village and generally brings all grain to the village that is bought elsewhere for seed or food (*bij khaj*) or for weddings or feasts But he will not carry grain away from the village without payment.

289 The *Chuhra Bhangi* or sweeper gets half as much as the *Barhi* or often less, and a share of the flesh of dead animals as already noted He sweeps the houses and village collects the dung pats it into cakes and stacks it works up the manure helps with the cattle and takes them from village to village News of a death sent to friends is invariably carried by him In villages where the women are secluded he gets a daily cake of bread from each house in addition or his allowance is the same as that of the *Barhi*

290 The *Jhinwar Kahar*[1] or bearer gets about the same as the *Chuhra* and receives a daily sheaf of corn at harvest He brings water to the reapers and at weddings and when plastering is being done and makes all the baskets needed and the *boria* or matting and *bijna* or fans generally of date palm leaves Where the women are secluded he also brings water to the house and receives a double allowance He is the fisherman of the country

291 The *Nai*[1] or barber receives a small allowance and shaves and shampooes makes tobacco and attends upon guests He also is

286 N W P 56 H T 315f
287 H T 317
288 H T 318
290 H T 339f
291 H T 1 341

the person to go on messages (*gamina*), and enjoys large perquisites at betrothals and weddings

292. The *Dhobi*[1] or washerman receives as much as the *Barhi* in villages where the women do not wash the clothes, but only a small allowance, if any, in others, where he is often not found at all

293 The *Teli* or oilman, *Gadriya*[1] or wool felter, the *Juláha* or weaver, the *Chhimpi alias Lilgar*[2] or dyer, the *Pumba, Dhunya*, or cotton scutcher, and the *Sonár*[3] or goldsmith, get no fixed allowance, but are paid by the job, usually either by retaining some portion of the material given them to work up, or by receiving a weight of grain equal to that of the materials

294. The *Dhának*[1] is an inferior sort of *Chuhra*, who will eat a *Chúhar's* leavings (*jhúta*,) while the *Chúhra* will not eat his They often take the place of *Chúhras*, and frequently weave cloth

294a The *Dúm* or *Mirási*[1] are the musicians of all, and the bards of the tribes other than Rajputs and Brahmans, whose *Bháts* and *Júgas* seldom reside in the district The *Dúm* is the very lowest of castes There are generally a few *Jogis*[2] —a low caste of devotee who take the offerings to Shiv and to Gúga Pir, and a few Mahomedan fakirs who take the offering to the Mahomedan saints

295 Inhabitants of the Village generally.—The remaining inhabitants of the village are chiefly Brahmans and Banyas The former are the family priests of the people, and even among Musalmans play an important part in weddings They live by the offerings of their clients The Banyas seldom follow any other calling than that of trade, though I know a few families who cultivate On *phág*, the day after Holi, they give a ball of *gur*, and on the day of the great Diwali a little parched rice or some sweets to the proprietors, in recognition of the subordinate position which they occupy in the village And on the latter day the *kamins* bring small offerings of articles belonging to the handicraft of each

295a All inhabitants of the village have a right to graze a reasonable number of cattle, their own property, on payment of the recognized dues, to collect dry wood for burning, to cut such bushes or grass for thatching or ropes as they need for use in their houses and cattle yards, and to dig mud for bricks, &c, from the village tank But a small cess for every axe or bill-hook is often taken from non-cul-

292 [1] N W P i, 81 H T i, 342
293 [1] H T i, 301 [2] N W P i, 120, 326 H T i, 337 [3] H T i, 346
294 [1] N W P i, 78 f H T i, 405
294a [1] N W P i, 84 f, 302, H T i, 400 [2] H T i, 259

Inhabitants of the Village generally

tivators where jungle is plentiful Cultivators have ordinarily a right to cut wood needed for agricultural implements and *pula* and grass from the common lands except in villages where they are very limited in extent and insufficient for the needs of the owners The manure of the cultivators is used by them in their own fields but they cannot sell it out of the village That of the non cultivators is the joint property of the village or if the homestead is divided by wards of the owners of the ward in which they live. It is kept in great joint stock heaps and divided by the owners according to ploughs The oilmen often pay Re 1 or Rs 2 on every press to the village

206 Non proprietary inhabitants are the owners of the materials of houses which they have built but not unless by purchase from the village of the land on which they stand But they cannot ordinarily be ejected from land they have occupied in or about the homestead whether for houses cattle yards fuel heaps or the like so long as they reside in the village and pay the customary dues unless the land occupied by them is needed for extension of the homestead proper in which case they would be ejected and have similar ground allotted them a little further off

207 The pay of the village watchmen is fixed by Government and paid by the community equally upon hearths But the further duties of watch and ward are performed as follows by the whole adult male inhabitants of the village. There is in every village a *thikar* Banya. *Thikar* literally means a shard and as lots are commonly cast with shards is now used for any rota or roll by which duties are performed in rotation The *thikar* Banya keeps a roll of all adult males except himself and the headmen and their next heirs who are exempt and these males have to keep watch in the village at night in rotation the *thikar* Banya warning each as his turn comes round In large villages there will be several men on duty at once The roll is revised generally every 12 years to include men who have grown up in the meantime This duty is called *thikar par excellence* though the *thikar* Banya keeps other rolls such as the allotment list of *Chamars* and the like

CHAPTER VIII—THE SOCIAL LIFE OF THE PEOPLE

298. The Homestead and the Homes—When a new village is founded, the first thing done is to dig out tanks to hold rain water for the cattle, washing, &c The village is then built on the spoil, and as in course of time old houses fall down and new ones are built, the village is raised high above the surrounding plain, in some of the old Nardak villages as much as 150 or 200 feet The space immediately around the village is called *goira,* and here the cattle stand to be milked, weavers train their warp, fuel is stacked, dung-hills made, ropes twisted, sugar presses erected, and all the operations conducted for which free space is necessary The village is generally surrounded by a mud wall and ditch as a protection against thieves, and is entered by gates, often of brick, and containing side-rooms in which the gossips sit when it grows hot under the huge *bar* tree or *pípal* which generally stands just outside Main streets (*gali*) run right through from one gate to another, and in Rajput and other villages where the women are strictly secluded, numerous blind alleys (*bagar*) lead from them, each being occupied by the houses of near relations In other villages the alleys run right through The proprietors, Banyas, and Brahmans, live in the centre, the menials on the outskirts of the village The houses are usually of adobe, except in the Nardak and the older villages, where brick is common, the change bearing patent evidence to the tranquillity which we have substituted for anarchy At two or three commanding positions are common houses (*paras*, *chopál*) belonging to the wards of the village There will also be a few *baithaks* or sheds for gossiping in, and many cattle pens scattered about the village

299 Entering the street door of a private house you pass into the outer room or *dahlíz*, beyond which you must not go without permission, and where your friend will come and talk It is often partly occupied by some calves Beyond this is the yard (*chauk*) separated from the streets by a wall, and in which the cattle are tied up in cattle-sheds (*bara*), and the women sit and spin Round this are the houses occupied by the various households of the family In front of each is a room with the side towards the yard open (*dalán* or *tamsal*) which is the family living room On either side of this will be a *sidri* or store room and a *chatra* or cook-room with its *chhúla* or hearth, and there is often an inner room beyond called *obrí* or *dobari* if with two doors, and *kota* or *kotri* if with one only Upstairs is the *chaubara* where the husband and wife sleep, while the girls and children sleep downstairs, and the boys in the *chopál* or the *dahlíz*

The Homestead and the Homes

300 There will be some receptacles for grain (*kotí*) made of rings of adobe built up into a cylinder This has a small hole in the bottom out of which the grain runs and keeps always full a small receptacle open in front from which it is taken as wanted There will be some ovens (*bharola hará*) for warming milk there will be recesses in the wall to act as shelves (*pendi*) one or two swinging trays or rope rings for water vessels a few bedstead (*manja khat*) made of wooden frames covered with netted string a few small stools (*pira pída khatola*) of identical construction a few small low wooden tables (*patra*) and some large baskets to store clothes in (*pitar*) There will be some small shallow baskets (*dalri*) for bread and grain and some narrow mouthed ones (*byri*) to keep small articles in

301 The metal vessels will consist of large narrow mouthed cauldrons (*tokna tokni*) for storing water in and cool ing at feasts smaller vessels of similar shape (*batloi*) for ordinary cooking and car rying water to the fields still smaller ones (*lota gadwa banta*) for dipping water and drinking from some cups (*sarda*) without handles some tumbler shaped drinking vessels (*gilas* corrupted from English glass) a broad shallow bowl or saucer (*katora bela*) for drinking hot liquids from a large tray (*thali*) a larger tray for kneading dough in (*parant*) a brass ladle (*karchi*) a spatula for turning bread (*koncha palta khurchna*) a thin iron plate (*tawa*) for baking cakes and some pairs of iron tongs (*chimta*) a fry pan (*karai*) and a sieve (*chhalni*) both of iron and an iron bucket (*dol*) for drawing water from the well The poorer people will not have all of these and poor Musalmans very few of them but most of them are necessary to a Hindu who may cook in but may not eat out of an earthen vessel if already used The Hindu s utensils are made of brass and perhaps a few of bell metal (*kansi*) the Mahomedan substitutes copper for brass which he does not use

302 The vessels of pottery will be some huge narrow mouthed vessels for storing water (*mat dagga*) similar ones but flatter and smaller (*jhakra kachhali jh oli* if mouth very big *thal*) with mouths
or flour similar but smaller
a if striped *ghara* if plain)
a gharia duna) milk pots
ls for cooking vegetables and
boiling and setting milk in (*handi baroli*) smaller vessels with spouts to carry milk to the fields in (*karua* if striped *lota* if plain if without a spout *lotki*) large flat saucers for cooking in and eating from (*kunda kanali*) bowls for keeping sugar &c (*táola*) small cups (*matkana*) and platters (*kasora kasori sarai* and *saranu*) used once at feasts and thrown away small earthen lamps (*diwa*) with a notch for the wick and various sorts of covers (*kappan kapni dhakni chilni*) also some large broad bowls for feeding cattle from (*nand kund nand bla*)

Besides, there are tiny pots for offerings and play (*kulia*), small saucers (*hazuri, khwajuri*) in which lamps are floated in honour of Khwajah Khizr, and which are also used for eating from and as covers, and tiny lamps (*chugra, chugsa*) for the Diwáli festival The earthen vessels used by Hindus are usually ornamented with black stripes (*chitar*), but Musalmans will not eat from vessels so marked, because the *ghara* full of water given to a Brahman (*mansna*) on Ekádshi after religious ceremonies by Hindus must be striped, and therefore the markings are supposed to be specially Hindu

303. Of course the metal vessels are expensive, but the remaining furniture of an ordinary village house costs very little The string of the bedsteads is made at home, while the carpenter makes the furniture, and the potter supplies the earthen vessels as part of their service

304. Daily Life and Food.—The day of twenty-four hours is divided into eight *pahrs* or watches, four of day counting from dawn, and four of night Each *pahr* is divided into eight *gharis* The dawn is called *pillphati*, the early morning *tarka*, the evening *sanj*

305. The daily life of the ordinary able-bodied villager is one of almost unremitting toil He rises before dawn, eats a little stale bread, gets out his bullocks, goes to the fields, and begins work at once About 8 o'clock his wife or a child will bring him a damper,* often stale, and a bowl of butter-milk or milk and water (*lhassi pakki* or *kachhi*) At noon he has a hearty meal of fresh damper and a little pulse boiled with spices (*dal*), or some boiled vegetable (*sag*), in the cold weather this is brought to him in the field, in the hot weather he goes home for it, and does not begin work again till 2 P M In the evening he comes home, and after feeding his cattle eats his dinner, the grand meal of the day His wife will have pearled some jawar and soaked it in the sun till it has swelled (*khata ana*) and then boiled it in milk (*rabri*), or she will have dry-boiled some whole grain and pulse mixed (*khichri*), or made a porridge of coarsely ground grain (*dalia*), or boiled up glutinous rice into a pink mass (*chawal*), or made a rice-milk of it (*khir*) There will be a little pease pudding (*dal*), or the pulse will be boiled with butter-milk and spices (*jholi, kadhi*) and some pickles (*achár*) or rough *chatni*, or some vegetable boiled with salt and *ghi* as a relish After his meal he goes out for a smoke and a chat to the *chopal*, or under the *bar* tree outside the village

306 The grain generally used in the hot weather is a mixture of wheat, barley, and gram, or any two of them, generally grown ready mixed, in the cold weather, jawár and maize Unmixed

* This is the best word I know for the bread cake of the country, though it is far inferior to a well made damper

Clothes

wheat is seldom eaten as it is too valuable The vegetables used are the green pods of the *lobiá* (Dolichos sinensis [1]) the fruit of the egg plant or *banjan* (Solonum melongena) and of the *bhindi* (Abel moschus esculentus [3]) and of many pumpkins (*kaddu*) gourds (*kirbii*) watermelons (*tarbuz*) and sweetmelons (*kharbuzah*) and the leaves of all the Brassicas of the cocl scomb or *chaulai* (Amaranthus poly gonus [4]) *methi* (Trigonella fenugrœcum[5]) of the small pulses and the roots of carrots (*gájar*) Wild plants so used have been men tioned in chapter I The spices and pickles are too numerous and unimportant to detail

A hearty young man in full work will eat daily from 1 to 1½ seer of grain one eighth of a seer of pulse and two seers or more of butter milk besides vegetables &c The richer Mahomedans occasionally eat goat s flesh but the Hindu does not touch meat while to the ordinary peasant of either religion animal food other than milk and *ghi* is quite beyond his means

307 The women of the family have all the grinding cooking cleaning the house and spinning to do among the Brahmans and Raj puts they are strictly confined to the walls of the court yard where they cook spin clean cotton of its seed grind flour husk rice and so on Among the Tagas and Gujars they go to the well for water and take the dinner to the field and often pick cotton and safflower Among the Jats and Rors they also weed and do other hard field work They all sit much about in the alleys spinning and gossiping often very much undressed and though their life is a hard one it is to judge from appearances by no means an unhappy one The boys as soon as old enough are tak[illegible] the cattle and from that time [illegible] labour of their lot At evening they [illegible] ders tipcat hide and seek and prisoner s base being favourite games

308 The life is a terribly dull one The periodical fair or *mela* and the occasional wedding form its chief relief together with the months of sugar pressing when everybody goes about with a yard of cane in his mouth and a deal of gossiping (as well as a deal of hard work) is done at the press But the toil is unremitting and when we think what a mud hovel in a crowded village innocent of sanitation must be in July and August we can only wonder at the marvellous patience and contentment of the villager

309 Clothes —The men wear a made turban (*págri*) or a strip of cloth (*dopatta*) wound round the head a short under coat buttoning up the front (*kurta*) an overcoat (*angarkha* if long *mirzai* or *kamri* if short) fastening with a flap at the side and a loin cloth (*dhoti* if broad

306 B P 853 S 67 S 160 S 21 B P 1453 S 181 B P 881 S 77

Clothes

and full, *árband* if scanty, *langar* if still more scanty), or a waist string (*tágri*, or if of silk, *pát*) with a small cloth (*langoti*) between the legs A single wrap (*chúdar*) in the hot weather and a double wrap (*dauh*), or a quilt (*rizai*) in cold, and a pair of shoes (*pútan*) complete the toilet Trowsers (*suthan*) are only worn on occasions of ceremony, a handkerchief (*agoncha*) is occasionally used Hindus and Musalmans are distinguished by the *angarkha* of the former opening to the right and of the latter to the left Musalmans sometimes wear their loin-cloth not passed between their legs (*tehman*), but they usually adopt the Hindu fashion, though they preserve their own name for the garment In the north the coats are worn much shorter than in the south, and the Jats of the south and west on occasions of State often wear turbans of portentous size, especially the Dehia and Dalal Jats In the north of the tract the turban is always white, lower down often coloured, Ghatwál Jats and Banyas generally wear them red, and religious devotees of a yellow ochre colour The other clothes are either white or made of prints, never whole coloured

310. The women wear a boddice to support the breasts (*angi*), a small coat down to the hips (*kurti*) buttoning to the right, a petticoat (*ghágri*, *lenga*) or drawers (*paijámah*), and a wrap (*orna*) Teli and Kumhár women wear the coat and petticoat in one piece like a gown (*tilak*) The coat is often not worn, but a Rajput woman *always* wears it, though she sometimes omits the boddice Musalman women generally wear drawers, and Hindu women petticoats So again Musalman women wear blue (indigo) coats and wraps without admixture of red or yellow, while a Hindu woman wears red clothes as a rule, and will not wear a blue coat or wrap at all, while her petticoat, if blue, must be spotted or embroidered with red or yellow But *all* Rajput women, unless very old, wear drawers, red or blue according to religion on the other hand, Musalman Gújar women wear petticoats after consummation of marriage and till they grow old, and Hindu Gújar women wear the petticoats spotted white or red, never whole red The whole red petticoat is called *dáman*, and the Gújar blue petticoat, with or without spots, *tukri* a petticoat or wrap spotted with red spots is called *thekma*, from *thekna* to spot Only prostitutes wear *wholly* white clothing

311 Children go naked till 4 or 5 years old A girl then wears a petticoat or drawers, and a boy a *langoti* and *tágri*, and sometimes a *jhugla* or shirt A girl cannot wear an *ángi* until she is married and lives with her husband

312. The every-day clothes are always made from the village-made cloth, which, though rougher, is much stronger than English Prints are largely brought into holiday use The ordinary dyes are indigo for blue, and safflower for red and yellow

Birth

A complete suit of female clothes is called *til* or *ti val* of male clothes *jora*

313 Jewels —The jewels (*gena*) worn by men are as follows — Earrings (*gokru*) bracelets made of a cylindrical bar of metal (*kangan todar*) a single necklace or rosary always containing beads (*m d i*) a broad necklace made of chains (*kantla*) a locket (*k nti*) rings (*gunthi*) Boys often wear waistbands of silver chain (*tagri*) The most usually worn of the al
(often sacred
not good taste
except the headmen to wear seal rings

314 Women wear a band of silver cowries going up the parting of the hair and fastening to pins on the back (*k iuri*) a frontlet on the forehead (*bindi*) plain earrings (*bujni*) earrings on the top of the ear

chains and bells fastened to the right hand corner of the *orn i* (*p llu*) bosses and chains fastened to the front of the *orna* so as to fall over the face (*ghungat*) a silver tassel on the petticoat over the right hip (*nara*) a bunch of chains and tassel on the ankle (*pajeb*) solid anklets (*bank*) Of course the varieties have innumerable names A woman s social

the rest only on state occasions such as fairs and the like The ordinary investment for spare capital is to buy jewels for one s wife as the money can always be realized on occasion

315 Personal Adornments —The custom of tattooing (*khunna godna*) is common except among the Rajputs and Brahmans Only women do it and they tattoo the chin the inside of the forearm the outside of the upper arm the sides of the waist the calf of the leg The Gujars do not tattoo the arm Men and prostitutes have small holes drilled in their front teeth and gold let in (*chaunp*)

316 Birth —When a woman is about to be delivered she is taken off the bed and put on the ground If a boy is born a brass tray is beaten to spread the news A net is hung up in the doorway and a
of *nim* is stuck into
e threshold which
can pass The swad dling clothes should be got from another person s house They are

Betrothal

called *potra*, thus "*potron ká amír*" is equivalent to "a gentleman from his cradle" For three days the child is not suckled For five days no one from outside, except the midwife, goes into the house On the night of the sixth day (natives always count the night *preceding* the day as belonging to it) the whole household sits up and watches over the child, for on the sixth day (*chhata*) the child's destiny (*lek*) is written down, especially as to his immunity from small-pox If the child goes hungry on this day, he will be stingy all his life, and a miser is accordingly called "*chhate ká bhúkha*," so a prosperous man is called *chhate ka raja* "On the sixth day the female relations come on visits of congratulation, but they must not go into the room where the woman is lying in The father's sister, too, comes and washes the mother's nipple and puts it into the child's mouth, and the mother takes off her necklace and gives it to her sister-in-law, *gur* is divided to the brotherhood On the seventh day the female *Dúm* or bard comes and sings Till the tenth day the house is impure (*sutak*), and no one can eat or drink from it, and no man can go into it unless belonging to the household On the tenth day (*dasútan*) the net is taken down, the fire let out, all the clothes washed, all the earthen vessels renewed, and the house new plastered, the Brahmans come and do *Hom* to purify the house, and tie a *tágri* of yellow string round the boy's waist, and the Brahmans and assembled brotherhood are feasted The child is often named on this day, the Brahman casting the horoscope and fixing the name But the parents sometimes change the name if they do not approve of the Brahman's selection At the birth of a girl the tray is not beaten, no feasting takes place, and no net is hung up or fire lighted The mother remains impure for five weeks, no one can eat or drink from her hands, and she takes her food separately As soon as there is hair enough the boy's head is shaved and his *choti* (scalplock) made, but there are no further ceremonies till his betrothal

317. Betrothal.—Betrothal is called *náta*, the ceremony *sagái* It generally takes place in infancy When the father of a girl wishes to betrothe her he makes inquiry for a marriageable boy of good family, the village barber acting the part of go-between If matters are satisfactory he sends the barber to the boy's village, who puts either a ring or one rupee into the boy's hand This is called *ropna* (from *rokna* to restrain), and if the boy's father returns Re 1-4, called *bidági*, to the barber to take to the girl's father, he thereby accepts the offer and clenches the engagement This engagement is not a necessary preliminary of betrothal, and is most customany among castes, such as the Rajputs, who marry at a comparatively late age, and who do not wish to go to the expense of a formal betrothal so long beforehand, for fear one of the children should die and the money be wasted Among the Gujars, on the other hand, the above ceremony constitutes betrothal, but the *tíka* is affixed at the time by the Brahman as described

Marriage preliminaries

below It is possible for the proposal to come from the boy s side in which case he sends his sister s necklace and if the girl keeps it his proposal is accepted But this is only done when the families are already acquainted

318 When it is decided to proceed to the betrothal (*sagai*) the barber and Brahman are sent with the *pich narial* or one rupee which has been all night in the milk which is set for butter a loin cloth (*pich*) and a cocoanut (*narial*) The boy is seated in a chair before the brotherhood the Brahman puts the *tika* or mark on the boy s forehead and the other thing into his lap and *gur* is divided by the boy s father who takes hold of the hand of each near relation in turn and puts some *gur* into it The boy s father then gives Re 1 4 * to the Brahman and double that to the barber This is called *neg* or *lag* and must be brought back to the girl s father and when so brought back completes the betrothal Ordinarily *no* relation of the girl *may* take any part in the embassy (*lagi*) of betrothal but Brahmans send the girl s brother in law or relation by marriage Exchange of betrothals between two families (*santa nata*) is considered very disgraceful and if done at all is done by a tripartite betrothal *A* betrothing with *B* *B* with *C* and *C* with *A* Among the Jats if the boy dies his father has a right to claim the girl for his other son or in default of another any male relation in that degree If the girl dies her family has no claim

319 Marriage preliminaries —Jats marry at about 5 or 7 years old Rors and Gujars at 12 to 14 Rajput at 15 16 or even older The prohibited degrees are given in § 189 Foster relationship is equivalent to blood relationship as a bar to marriage Any number of wives may be married but a second wife is seldom taken unless the first is childless A sister of a first wife may be married or any relation in the same degree but not one above or below

320 The boy s Brahman fixes an auspicious day and decides how many ceremonial oilings (*ban*) the boy is to undergo It must be 5 7 9 or 11 and the girl will undergo *two* fewer than the boy The boy s father then sends a *lagan* or *tewa* generally 9 11 or 15 days before the wedding which is a letter communicating the number of *ban* and the number of guests to be expected and is accompanied by a loin cloth or a complete suit of female clothes (*te val*) and a pair of shoes In all these communications the Brahman who takes the letters always gets Re 1 4

321 The boy and girl then undergo their *bans* in their respective homes The women collect and bathe them while singing and rub them from head to foot with oil and turmeric and peameal The *bans* are given one each night and are so arranged that the boy s will

* Whe th pe pl g e R 1 4 th *Ját* p y Re 1 d 4 *t k* th t is S cou try p t 5 to th

Marriage preliminaries

end the night before the procession starts, and the girl's the night before the wedding After each *bán* the mother performs the ceremonies of *árata* and *sewal* described below to the boy The girl has only *sewal* performed, as *árata* can under no circumstances be performed over a female The day of the first *bán* is called *haladhát*, or "red hand" Seven women with living husbands husk 5¼ seers of rice and make sweets with it The Brahman comes and sticks up two small round saucers, bottom outwards, against the wall with flour, and in front of them a flour lamp is kept alight in honour of ancestors On either side he makes five marks of a bloody hand on the wall This is done in each house In the girl's village the street turnings all the way from the village gate to the bride's house, and the house itself, are also marked with red or red and white marks After the first *bán* the boy has the *rákri* or black woollen thread, with a small iron ring (*chhalla*) and some yellow cloth and betel-nut, tied round his left ankle The girl has her small gold nosering put on, for up to that time she can only wear a silver one, and she must not wear a large one till she goes to live with her husband She also takes off her silver wristlets (*chúrá*) which no married woman may wear, and substitutes for them at least five of glass on each arm These glass wristlets and her nosering form her *sohág*, and a woman who has a husband living (*sohágan*) must always wear them When her husband dies she breaks the wristlets off her arm, and throws the pieces and nosering on to the corpse, and they are wrapped up with it in the shroud After that she may wear silver wristlets again And occasionally, if a widow has plenty of grown up sons, she will continue to wear the *sohág*

322. The day before the procession is to start or arrive, as the case may be, the *manda* or *mandab* is erected At the boy's house they take five seed-stems of the long *sarkara* grass and tie them over the lintel They dig a hole in front and to the right of the threshold, put money in it, and stand a plough beam straight up in it To this they hang two small cakes fried in *ghi*, with three little saucers under and two above this, and two pie, all tied on a thread Finally, some five *beran* culms, and a *dogar*, or two vessels of water one on top of the other, are brought by the mother, attended by singing women, and after worship of the potter's wheel (*chák*), are put by the door as a good omen At the girl's house the same is done, but instead of burying the plough beam, they erect a sort of tent with one central pole, and four cross sticks, or a stool with its four legs upwards, at the top, and on each is hung a brass water-pot upside down surrounding a full one in the middle, or a curtained enclosure is formed, open to the sky, with at each corner a *lichi* or "nest" of five earthen vessels, one on top of the other, with a tripod of bamboos over each

323. On the same day the mother's brother of the boy or girl brings the *bhát* This is provided by the mother's father, and consists

The Wedding

of a present of clothes and necessarily includes the wedding suit for the bride or bridegroom and in the case of the boy the loin cloth and head dress he is to wear at the marriage for all that either party then wears must always be provided by his or her mother s brother The boy s maternal uncle also brings a girl s suit of clothes and a wedding ring and the girl wears *both* suits of clothes at the wedding When the *bhat* is given the boy s or girl s mother performs the ceremony of *arta* or *munni* She takes a 5 wicked lamp made of flour places it on a tray and while her brother stands on a stool waves it up and down his body from head to foot She also performs *s wal* which consists in picking up her petticoat and touching his body all over with it They then take the brother in doors and feed him on *laddus* or sweetmeat balls The people then at the boy s village collect in the village common room and the *neota* (§ 337 *infra*) is collected the *bhati* (giver of the *bhat*) putting in his money first which is a free gift and not entered in the account

324 The Wedding —On the day when the marriage procession (*janet barat*) is to start the boy receives his last *ban* and is dressed in his wedding suit the *kangna* or seven knotted sacred thread is tied on his wrist and his head dress is tied on consisting of a crown (called *mor*) of mica and tinsel a *p chi* or band of silver tinsel over the turban and a *sera* or fringed vizor of gold tinsel

He then performs the ceremony of *ghurchari* The barber leads him while singing women follow and the mother with a vessel of water and his sister puts her wrap over her right hand and on it places rice which she flings at his crown as the boy goes along He then gives her Re 1 worships the gods of the homestead and gives Re 1 to the Bairági He is then put into a palanquin and the procession to which every house nearly related must contribute a representative and which consists of males only starts as much as possible on horseback with music of sorts At each village they pass through they are met by the barber the *Dum* and the Brahmans whom they pay money to and who put *dubh* grass on the father s head and pray that he may flourish like it The procession must reach the girl s village after the midday meal

325 A place rigorously outside the village has been appointed for them called *bag* or *gora* The girl s relations come to meet them bringing a loin cloth and 11 *takas* and a little rice and sweetmeats in a tray The two parties sit down the Brahmans read sacred texts the girl s Brahman affixes the *tika* on the boy s forehead and gives a loin cloth and 11 *taka* taking a loin cloth and 21 *taka* in exchange The two fathers then embrace and the girl s father takes Re 1 from his turban and gives it to the boy s father who gives him in exchange the cloth which is to form the *patka* at the wedding The girl s father then asks the boy s father for either 11 or 14 pice the *gorra ká kharch* or expenses of

The Wedding

the *gotra*, and these he distributes to the menial bystanders, and makes the boy's father pay something to the barber and Brahman The procession then proceeds to the girl's house, the boy being put on a horse, and pice being thrown over his head as a scramble *(bakher)* for the menials They do not go into the house, but at the door stand women singing and holding flour lamps The boy is stood on a stool, and the girl's elder married sister, or if she has no married sister her brother's married daughter, performs to him the ceremonies of *árata* and *sewal* already described, and the boy's father gives her Rs 1-4 She also performs the ceremony of *warpher* by waving a pot of water over the boy's head and then drinking a little of it, and waving a rupee round his head The girl's and boy's relations then fight for the stool on which the boy stood, and the boy's relations win, and carry it off in triumph to the *jandalwasa* or *dandalwasa*, which is the place fixed for the residence of the guests This *should*, in theory, be outside the village, but for convenience sake it is generally in the *chopál* Presently the guests are bidden to the girl's house, where they eat, but the boy stays in the *jandalwása*, as he must not enter the girl's house till the wedding itself So, too, the girl's relations do not eat, for they cannot eat that day till the wedding ceremony is over This ends the first day called *dhakao*

326 That night, at some time after sunset, the wedding ceremony (*phera*) takes place Shortly before it the girl's barber goes to the *jandalwása*, where the boy's father gives him a complete suit of clothes for the girl, some jewels, sacred coloured strings to tie her hair up (*nála*), some henna for her hands, and a ring called the yoke-ring (*júa ki angúthi*) The girl wears nothing at all of her own unless it be a pair of scanty drawers (*dhola*), and she is dressed up in the above things, and *also* in the clothes brought in the *bhát* by her maternal uncle, one on top of the other The ring she wears on the first finger, and on her head she wears the *cholásop*, or an unsewn and unhemmed reddish yellow cloth provided by her maternal grandfather, used only at weddings, but worn after the ceremony till it wears out Meanwhile her relations sit down with their Brahman under the *manda*

327. There a place on the ground (*chauri*, *bedi*) has been fresh plastered, and the Brahman makes a square enclosure (*mandal* or *púrat*) of flour, and on it puts sand and sacred fire (*hawan*) of *dhák* wood, and *ghí*, and sugar, and sesame Meanwhile the other party has been sent for, and the boy, dressed in the clothes brought by his maternal uncle, comes attended by his father and nearest relations only They sit down to the north, the girl's people to the south, and two stools are placed facing the east, on which the boy and girl, who are fetched, after all have sat down, by her mother's brother, are seated each next his or her people, so that she is on his right hand When the ceremony

commences the girl s people hold up a cloth for a minute so as to hide the boy and girl from the boy s people just as a matter of form The Brahman puts five little earthen pots (*kulra*) in the sacred enclosure and makes the boy and girl dip their third fingers into turmeric and touch pice which he then puts into the pots the boy offer ing twice as many as the girl. Sacred texts are then recited The girl then turns her hand palm upwards her father puts one rupee and a little water into it and takes the hand and the rupee and solemnly places them in the boy s hand saying I give you my daughter I give her virgin (*main apni larki dun kanya dun*) This is called *kanya dan* Then the sacred fire is stirred up the Bráhman ties the hem (*palla*) of the girl s wrap to a piece of cloth called the *patká* and the boy takes the latter over his shoulder and leads her round the fire counter clockwise four times and then she goes in front and leads him round three times Meanwhile the family priests recite the tribe and gens of each and the names of their ancestors for four generations This is the *phera* and constitutes the real marriage. After this the Brahmans formally ask each whether he or she accepts the other and is ready to perform duties which are set forth in time honoured and very impressive and beautiful language. The boy and girl then sit down each where the other sat before and this completes the cere mony The bride and bridegroom are then taken into the girl house where the girl s mother unties the boy s head dress and gives him a little *ghí* and *gur* mixed up There two small earthen saucers have been fixed with flour against the wall bottom outwards and a lamp lighted in front of them This they worship the boy returns to the *jandal wasa* after redeeming his shoes which the women have stolen by paying Rs 1 4 while the girl stays with her people

328 After ceremonies.—On the second day (*badhar*) the boy s people must not eat food of the girl s people and they get it from their relations and friends in the village Various ceremonies involving payment to Brahmans and barbers are performed

At night the gi
two fathers who are
gives his *simdi* one i
to eat at the girl s house But when after eating they have returned to the *jandal wasa* the girl s friends follow them and make them give a nominal payment for it called *roti ka kharch* which is given to the menials

329 On the third day called *bida* the *neota* is collected in the girl s house just as it was in the boy s house before the *barat* started The boy s people then eat at the girl s house and return to the *jandal wasa* whence they are presently summoned to take leave (*bida hona*) The boy s father then presents a *bari* which is a gift of sugar almonds sacred threads fruits &c to the girl s people The ceremony of *patta*

is then performed The girl's relations form a *panchâit* or council, and demand a certain sum from the boy's father from which the village menials then and there receive their fixed dues The money is called *patta* The girl's *panch* having ascertained that all have been paid, formally ask the boy's father whether any one in the village has taken or demanded ought of him save this money, and he replies in the negative During this ceremony the girl's father sits quite apart, as he must have nothing whatever to do with taking money from the boy's people, and in fact often insists upon paying the *patta* himself While the *patta* is being distributed, the girl's mother makes the boy perform the ceremony of *band khulai*, which consists in untying one knot of the *manda* She then puts the *tíka* on his forehead and gives one rupee and two *laddús* (a sweetmeat made into a ball), and the other women also feed him This is called *johari* Then the girl's father presents the *dan* or dower, which includes money, clothes, vessels, &c, but no female jewels, and the *barát* returns to the *jandalwása* The boy's father then visits all the women (*gotan*) of his own gens who live in the village, and gives each one a rupee The horses and bullocks are then got out, and should assemble at the outer gate of the village, though they sometimes go to the door of the house for convenience Her maternal uncle takes the girl, and followed by women singing, places her in the ox-cart in which she is to travel She is accompanied by a female barber called the *larumbi*, and the boy is kept apart When they are just starting the two fathers embrace, and the girl's father gives the other one rupee and his blessing, but the girl's mother comes up, and having dipped her hand in henna, claps the boy's father on the back so as to leave a bloody mark of a hand (*thapa*) on his clothes A few pice are scrambled over the heads of the happy pair, and the procession starts for home, the girl screaming and crying as a most essential form

330 When the *barát* reaches the boy's village, the friends are collected at the boy's door, which has five red marks of a hand on the wall on either side The boy and girl are stood on the stool which the *barát* have brought from the other village (see § 325), and the boy's mother measures them both with a *sela* or string made of the hair of a bullock's tail, which is then thrown away She also performs the ceremony of *sewal* (see § 323), and waves a vessel of water over their heads and drinks a little of it The boy's sister stands in the doorway, and will not admit them till the boy pays her one rupee That night the boy and girl sleep on the floor, and above where they sleep are two mud saucers stuck, bottom outwards, against the wall, and a lighted lamp before them

331 On the next auspicious day the girl puts on the wrap with the *patka* still knotted to it, the boy takes it over his shoulder and leads her off, attended by women only and music, to worship the god of

Consummation of the Marriage

the homestead the sacred *tulsi* tree the small pox goddess and all the village deities *and the wheel of the potter who gives them a nest of* vessels for good luck They go outside the village and perform *kesora* which consists in the boy and girl taking each a stick and fighting together by striking seven blows or more Then comes the ceremony of *kangna khelna* The girl unties the *kangna* or 7 knotted sacred thread which the Brahman tied round the boy s wrist before he started and he undoes hers The *kangnas* are then tied to the girl s yoke ring and it is flung by the boy s brother s wife into a vessel of milk and water with *dubh* grass in it. The two then dip for it several times with their hands the finder being rewarded with cheers * Till this ceremony is performed the boy and girl must sleep on the ground and not on bedsteads Then the boy s elder brother s wife (his *bhabi*) sits down opens her legs and takes the boy between her thighs The girl sits similarly between the boy s thighs and takes a little boy into her lap The girl or his mother gives him two *laddus* and he says a son for my sister in law and two *laddus* for me

Some few days after a barber comes from the girl s village and takes her back to her home

332 Consummation of the Marriage —So far the bride and bridegroom are infants and of course the marriage has not been con summated in fact a child conceived at this stage would be illegitimate The consummation takes place after the return of the girl to her hus band s house called *challa* or *muklawa* This takes place when the girl is pubert but must be in either the 3rd 5th 7th 9th or 11th year after the wedding The girl s people fix the day and the boy with some male friends but without his father goes to fetch her The girl then for the first time wears a large nosering an armlet (*tadia*) and a boddice or *angi* The girl s father gives her some clothes and jewels and they *go off home As they start the girl must scream and cry* bitterly and bewail some near male relation who has lately died saying oh ! my father is dead or oh ! my brother is dead After reaching home they live together as man and wife

333 The girl stays with her husband a few weeks only and must then return to her father s home and stay there some six months or a year She is then brought back for good by her husband her father presenting her with her trousseau (*pitar*) of clothes and jewels This she retains but all clothes given by her father to the boy s father previous to this at marriage or *challa* must be divided among the female relations of the boy s father and not retained by him

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Amo g the Rajp ts th r a tw *kángr as* th rupee and th oth w th b t l n t t d t t Th c m y p form d th the form *káng* t th g l s v ll g th d y fte th *pher* and w th the latter as d sc bed abov

Relations following upon Marriage

334. This is the course of affairs when the parties marry in infancy But among Rajputs who always marry late, and generally when the marriage has from any cause been delayed till puberty, there is no *muklawa*, but on the third day before the *barat* starts the ceremony of *patra phera* or changing the stools is performed The girl changes all her clothes, putting on clothes provided by her father, and also a large nosering, armlets, and bodice The boy and girl are then seated on stools, and exchange places, each sitting where the other was, and the *patka* is tied up The girl's father presents both the dower and the trousseau at the same time, and the pair, on reaching home, live as man and wife

335 **Musalman and other variation**—Among Musalmans there is no *phera*, the *nikah* or Musalman marriage ceremony being substituted for it, which the *qazi* reads in presence of witnesses Envoys (*wakils*) go into the girl's house to take her consent and come out and announce it, the boy consents himself three times, and the ceremony is complete But among converts to Islam, at any rate, the other customs and ceremonies are almost *exactly* the same Of late years the Musalmans have begun to leave off the *sewal* and *arata*, and they often use no *pechu*, though they retain the *sehra*

Local and tribal variations are numerous, but quite unimportant There are innumerable *minutiæ* which I have not detailed, and which vary greatly, though quite constant for each tribe or locality The Rajputs never use a *mor*, nor have the custom of *thapa*, and the tent is often omitted from the *manda* in the Khadir

336 **Relations following upon Marriage**—The wife has to hide her face before all the elder brothers and other elder relations of her husband, not so before the younger ones, elder and younger being, of course, a matter of genealogical degree, and not of age Nor may she ever mention the name of any of the elder ones, or even of her husband himself*

When once the ceremonial goings and comings are over—among Rajputs, for instance, where there is no *muklawa*, directly the wedding is over—she may never return to her father's house except with his special leave, and if he sends for her, he has to give her a fresh dower

The village into which his daughter is married is utterly tabooed for the father, and her elder brother, and all near elder relations They may not go to it, even drink water from a well in that village, for it is shameful to take anything from one's daughter or her belongings On the other hand, the father is continually giving things to his daughter and her husband as long as he lives Even the more dis-

* In one village there is a shrine to an ancestor who had died childless It is known by his nick name, and not by his proper name, because the women of the family do not like to pronounce the latter

tant elder relations will not eat or drink from the house into which the *girl is married though they do not taboo the whole village* The boy s father can go to the girl s village by leave of her father but not without

337 The Custom of Neota —There is a curious custom called *neota* by which all the branches of a family contribute towards the expenses of a marriage in any of its component households If *A* and *B* are relations and *A* first marries his daughter *B* will contribute say Rs 10 If *B* then marries his daughter *A* must contribute more than this or say Rs 12 At further marriages so long as the *neota* consists between them the contribution will always be Rs 10 so that *B* will always owe *A* Rs 2 but if either wishes to put an end to the *neota* he will contribute if *A* only Rs 8 if *B* Rs 12 This clears the account and *ipso facto* closes the *neota* The *neota* is always headed by the *bhati* or mother s brother but his contribution is a free gift and does not enter into the account which is confined to the relations of the male line These contribute even when the relationship is very distant indeed

338 This is the real *neota* and is only called into play on the occasion of the marriage of a daughter or son of the house But in a somewhat similar manner when the *bhat* is to be provided by the mothers father he sends a little *gur* to each *neotna* or person between whom and himself *neota* exists and they make small contributions generally Re 1 each So too when the boy s father gives *gur* to his relations at his son s betrothal (§ 318 *supra*) they each return him Re 1

The Rajputs call the custom *bel* instead of *neota* and take it in the case of the *bhat* only from descendants of a common great grandfather

339 Re marriage of Widows —As I have said a man may marry as often as he pleases If he marries again on the death of his wife he is called *dheju* The ceremonies are exactly the same for a man s different marriages But under no circumstances can a woman perform the *phera* twice in her life Thus among the Rajputs Brahman and Tagas who do not allow *karewa* or *karao* a widow cannot under any circumstances remarry But among other castes a re marriage is allowed under the above name.[1] It is in its essence the Jewish Levirate that is to say on the death of a man his younger brother has first claim to the widow then his elder brother and after them other relations in the same degree though *karewa* cannot be performed while the girl is a minor and her consent is necessary But it has been extended so that a man may marry a widow whom he

339 N W P 274ff.

could not have married as a virgin, the only restriction being that she is not of his own gens Thus, a Gujar may marry a Jat or Ror widow of any gens but his own I need hardly say that neither marriage, nor adoption, nor any other ceremony, can change the gens of a man or woman, that being, under all circumstances, the gens of the original father Even women of menial castes can be so married, but the woman is then called *heri huti*, though it is still a real marriage At the same time any marriage out of one's own caste, even if with a higher one, is thought disgraceful

The marriage must not take place within a year of the husband's death It is effected by the man throwing a red wrap over the woman's head and putting wristlets (*chúra*) on her arm in presence of male and female members of the brotherhood There is no *neota* in *karewa*, because there are no expenses

340 Death.—When a Hindu is on the point of death, he is taken off the bed and put with his feet to the east on the ground, on a fresh plastered spot strewn with the sacred *dúbh* grass and sesame Ganges water and milk, and a tiny pearl (they can be bought for a few pice), and gold, are put into his mouth The friends are called in, and the son or nearest heir shaves completely in public, draws water with his right hand alone, bathes, and puts on a clean loin-cloth, turban, and handkerchief, and no other clothes Meanwhile the widow has broken her *sohag*, and throws it on the corpse, which the men or women of the family, according to its sex, bathe with the water the son has drawn, put on it a loin-cloth, and sew it up in a shroud (*guji* or *ghúgi*) They then place it on the bier (*arti* or *pinjri*) and bear it out head foremost At the door a Brahman meets it with *pinds* (balls of dough) and water which the son places on the bier by the head of the corpse On the road they stop by a tank or some water, and *pinds* are again put on the bier Then all the *pinds* are flung into the water, and the bier is taken up the reverse way, with the feet foremost When they reach the burning place (*chhalla*) the corpse is placed on the pyre (*chita*), and the son taking sacred fire lit by the Brahman, lights the wood (*dág dena*) and fans it This is the *kiria karm* so often mentioned When the bone of the skull is exposed, the son takes one of the sticks of which the bier was made, drives it through the skull (*kapál kiria*) and throws it over the corpse beyond the feet When the corpse is completely burnt, all bathe and return together to the house, and then go off to their homes The burning should be on the day of death, if possible, but it should always be before sunset

341 If the burning was performed on the bank of the Jamna, water is thrown on the ashes, if in the Kurukshetr, the bones are thrown into one of the sacred tanks, and all is over Otherwise on

Death

the third day the knuckle bones and other small fragments of bone (*phul*) are collected If they can be taken to the Ganges at once well and good if not they are buried in the jungle But they must not be brought into the village in any case and when once ready to be taken to the Ganges they must not be put down anywhere but must always be hung up till finally thrown by a Brahman into the stream Their bearer who must be either a relation or a Brahman or Jhínwar must sleep on the ground and not on a bed on his way to the Ganges After the death a *ghara* of water with a hole in the bottom stuffed with *dubh* grass so that water will drip from it is hung in a *pipal* tree and the water is filled and a lamp lighted daily for 11 days.

342 The house is impure (*pátak*) till the thirteenth day after death On the tenth day the Máha Brahman or Achárj [1] comes The household perform *dasáhi* that is they go to the tank wash their clothes shave offer 10 pinds and give the Achárj grain enough for 10 meals On the eleventh or day of *sipindi* a bull calf is let loose with a trident (*tarsul*) branded on his shoulder or quarter to become a pest The Achárj is seated on the dead man s bedstead and they make obeisance to him and lift him up bedstead and all He then takes the bedstead and all the wearing apparel of the dead man and goes off on his donkey But he is held to be so utterly impure that in many villages they will not allow him to come inside but take the things out to him On the twelfth day the *Gujráti* Brahman is fed being given *sidha* or the uncooked materials for dinner only as he will not eat food cooked even by *Gaur* Brahmans On the thirteenth day the Gaur Brahmans are fed and then the whole brotherhood the walls are plastered the earthen vessels changed all clothes washed and the house becomes pure If the man died on his bed instead of on the ground the house is impure for 45 days and after the eleventh day special ceremonies called *jap* have to be performed to purify it Again if he has died on certain inauspicious days of the month called *panchak* five or seven Brahmans have to perform *bain* in order to ease his spirit.

343 The same ceremonies are observed on the death of a woman Children under 8 years of age are buried without ceremony

There are no particular ceremonies observed at the death of a Musalman who is of course buried with his feet to the south Gosains and Jogis are buried sitting up in salt and used to be so buried alive before our rule Their graves are called *samads* Bairagis are burnt and in the case of an abbott a *samád* erected over some of the bones Chamárs are burnt while sweepers are buried upside down (*mundha*)

Character and disposition of the People

344 Ceremonies for the repose of the spirit.—The disembodied spirit while on its travels is called *pret*, and remains in this state for one year, making twelve monthly stages. For the first twelve days after death a lamp is kept lit, and a bowl of water with a hole in the bottom for it to drip from kept full in a *pipal* tree for the use of the spirit. At the end of each month the son gives his family priest the "monthly *ghara*," which consists of a *sidha* or uncooked food for two meals, a *ghara* of water, a towel, an umbrella, and a pair of the wooden shoes (*kharaun*) used where the impure leather is objectionable. At the first anniversary of the death (*barsaundi*) he gives the Brahman a bedstead and bedding, a complete suit of clothes, some vessels, and such other parts of a complete outfit as he can afford. This is called *sajja*. He also gives him a cow with a calf at foot and some rupees in water.

345 Character and disposition of the People.—I have a great liking for the ordinary villager. His life is one of monotonous toil under very depressing circumstances. He grumbles much, but only as a farmer is bound to do; and he is marvellously patient, cheery, and contented on the whole. He is often exceedingly intelligent considering his opportunities, he is hospitable in the extreme, and he loves a joke when the point is broad enough for him to see. His wants are easily satisfied; he has formulated them thus:—

"*Das change bail dekh, wa das man berri*,
"*Haqq hisabi nya, wa sak su jori*,
"*Bhúri bhains ka dúdh, wa rabar gholna*,
"*Itna de kartar, to baor na bolna*."

"Let me see ten good oxen and ten maunds of mixed grain, the milk of a grey buffalo and some sugar to stir into it, a fair assessment demanded after the harvest. God give me so much, and I wont say another word."

I will even say that according to his standard he is moral, though his standard is not ours. The villager looks at the end, and not at the means. If he honestly thinks that his friend is in the right in his claim, a respectable man will tell any number of circumstantial lies to produce the same impression on the mind of the Judge. But if he thinks him in the wrong, he will not bear evidence either for or against him; he will say that he knows nothing about the matter. And when formally confronted by the whole brotherhood, a villager will rarely persist in a claim which he knows to be false. Of the good faith that governs the mass of the people in their dealing with one another, it would, I believe, be difficult to speak too highly, especially between members of the same community.

Education

Of their sexual morality I can say nothing If scandals are common we hear but little of them for they are carefully hushed up My impression is that the village life is infinitely more pure in this respect than that of an English agricultural village partly no doubt because of the early marriages which are customary

346 The loyalty of the people in the Tract is I think beyond suspicion They remember the horrors of the days of anarchy which preceded our rule too vividly to be anything else Two points in our administration however are especially complained of by them They complain bitterly of Native Judges and say that since their authority has been extended *an ther hone lagi* it has begun to grow dark And they object to our disregard of persons and to our practical denial of all authority to the village elders They say that a headman now a days cannot box the ears of an impertinent village menial without running the risk of being fined by the Magistrate and I think it can hardly be denied that in many respects our refusal to recognise the village as a responsible unit is a mistake while where we do partly enforce the system of joint responsibility we wholly deny to the people the privilege of joint government

347 **Education** —The villagers are as a mass utterly uneducated A considerable number of the headmen can read and write Mahájani or Hindi as they call it to some extent but many of them do not know even that and not a dozen of them can write the Persian character Outside the rank of the headmen the people are almost wholly illiterate Many of them cannot count beyond 20 and would represent 64 as three scores and four There are 17 primary schools in the Tract with 974 scholars of which 542 are Hindus and 432 Musalmans while 505 belong to the cultivating classes and 474 attend village schools There are two middle schools at Karnal and Panipat with a total of 64 scholars of which 40 are Hindus 24 Musalmans and 33 sons of cultivators It is very difficult for a villager to send his boy to school unles there is one in or quite close to his village and even when this is the ca e they object to sending their sons to school because they say it renders them discontented with and unfits them for their position The Persian especially they object to I believe that if the teaching in the village schools was confined to arithmetic and to reading and writing in the Mahajani and Persian characters without any study of the Persian language—was in fact really elementary—and if the number of schools was considerably increased as probably might then be done without additional expense the attendance would soon rise while provision might still be made for the further education of exceptionally promising lads

348 **Language** —The language of the Tract is Hindi with a small admixture of Punjabi words especially in the northern portion

Language.

The dialect varies slightly from north to south, and especially the Jats of the southern border use many words not used in the rest of the Tract, with a pronunciation and accent quite peculiar to them. A curious instance of the formation of inflections is afforded by the local use of the verb *sún, so, sai, sain,* for *hún, ho, hai, hain*. The *s* is frequently affixed to the end of the verb, and the remainder of the auxiliary dropped. Thus "*sara dangar kal ho rahas*" "all the cattle are starving," instead of "*ho raha sai*"

CHAPTER IX —THE RELIGION OF THE PEOPLE

349 Statistical —Statements Nos XXII and XXIII give the figures for religion and show that the rural population of the Tract consists of—

Musalmans	55 010
Hindus	207 147
Total	262 157

The figures for the urban populations are given in §171 *supra*

Practically the religions of the Tract reduce themselves to these two There are no Sikhs Christians or Buddhists only an occasional Jain is to be seen the Saraogis who have two fine temples in Panipat are almost confined to the towns and wholly I believe to the Banya caste and the village communities are without exception either Musalman or Hindu Among Hindus are included the sweeper caste who would not be recognised by Hindus proper as belonging to their religion A brief description of their worship will be found in §428

350 Original Musalmans —The Musalmans of the Tract must be divided into two very distinct classes The original Musal mans such as Saiyads Pathans Qoreshi Shekhs and Mughals are strict followers of Islam In the villages a few laxities have crept in but in the main their religion and its customs are those of all Musal mans and I shall say no more about them

351 Musalman Converts —But the case is very different with the Musalman Rajputs Gujars and similar converts from Hinduism Their conversion dates for the most part from the close of the Pathan and the early days of the Mughal dynasty[1] Many of them are said to have been converted by Aurangzeb and these were probably the last made for the change of faith always dates from at least eight generations or 200 years back and proselytism was of course un known under the Sikhs and Mahrattas In some cases the whole community of a village is Musalman but quite as often one branch has abandoned and the other retained their original faith and in no case has any considerable group of villages embraced Islam as a whole

352 Living thus side by side with their Hindu brethren in the same or the next village sharing property in the same land and form ing a part of the same family with them it is impossible that the Musalman converts should not have largely retained their old religious

351 Ell ii 245 42

customs and ideas In fact, till some 25 years ago, they were Musalman in little but name They practised circumcision, repeated the *qalmah*, and worshipped the village deities But after the mutiny a great revival took place Mahomedan priests travelled about preaching and teaching the true faith Now almost every village in which Musalmans own any considerable portion has its mosque, often of adobe only , and all the grosser and open idolatries have been discontinued But the local deities and saints still have their shrines, even in villages held only by Musalmans , and are still worshipped by the majority, though the practice is gradually declining The women, especially, are offenders in this way A Musalman woman who had not offered to the small-pox god would feel that she had deliberately risked her child's life Family priests are still kept up as of old , and Brahmans are still fed on the usual occasions As for superstitions, as distinct from actual worship, they are untouched by the change of faith, and are common to Hindu and Musalman

353 Hindus —The student who, intimately acquainted with the Hindu Pantheon as displayed in the sacred texts, should study the religion of the Hindus of the Tract, would find himself in strangely unfamiliar company It is true that all men know of Shiv and of Vishnu ,* that the peasant, when he has nothing else to do to that degree that he yawns perforce, takes the name of Nárain , and that Bhagwán is made responsible for many things not always to his credit But these are the lords of creation, and too high company for the villager He recognises their supremacy , but his daily concerns in his work-a-day-world are with the host of deities whose special business it is to regulate the matters by which he is most nearly affected A peasant expressed the matter to me thus —"We know, sahib, that the Lieutenant-Governor is above all at Lahore , but we only adore him once in every few years, when he visits these parts You, as yet, are subordinate to him , but we worship you daily and hourly"

354 Minor Deities.—These minor deities, whose cult comprises the greater part of the peasant's religious ideas and acts, may be broadly divided into four classes First come the benevolent deities, such as the Sun, the Jamna, Bhúmia, Khwája Khizr, and the like Then the malevolent deities, mostly females, such as the Small-pox Sisters, Snakes, the Fairies, &c Then the sainted dead, such as Gúga, Lakhdáta, and Báwa Faríd , and finally, the malevolent dead, such as Saiyads (Shahíds)

355 It is a curious fact that most of the malevolent deities are worshipped chiefly by women, and by children while at their mother's apron Moreover, the offerings made to them are taken not by Brah-

* Brahma is never mentioned save by a Brahman, and many of the villagers hardly know his name

mans but by impure and probably aboriginal castes * and are of an impure nature such as *churmas* fowls and the like And they are seldom or never worshipped on Sunday which is the proper day for the benevolent Hindu deities The primæval Aryan invaders must have inter married probably largely with the aboriginal women and it is a question to which I think inquiry might profitably be directed whether these deities are not in many cases aboriginal deities Even setting aside the theory of inter marriage it would be natural that the new comers while not caring to invoke the aid of the beneficent *genii loci* might think it well worth while to propitiate the local pow ers of evil upon whose territory they had trespassed †

In this very spirit the Hindus have adopted the worship of the Mahomedan saints and especially of the more malevolent ones It can do no harm to worship them while they may be troublesome if not propitiated and all these saints are commonly worshipped by Hindus and Mahomedans alike

356 Effect of Islam upon Hinduism —I think there can be no doubt that the presence of Islam by the side of Hinduism has had considerable effect upon the latter The Hindu villager when asked about his gods will generally wind up by saying after all there is but one great one (sahib) and they generally give the information asked for with a half smile and will often shake their finger and say it is a *kachha* religion Nor do I think considering the terms of real intimacy which existed between me and many of the speakers that this was said in any way as a concession to any religious prejudices that I might be supposed to possess In one village they told me with a laugh that if Government was going to assess them they would pull all their shrines down Of course the existence of such a feeling is exceedingly compatible with the most scrupulous care not to neglect any of the usual observances and whatever might be his private convictions or absence of conviction a man would feel that it would be pre eminently unsafe to omit the customary precautions and would be thought ill of if he did so

357 The Sect of Sadhs —There is a new sect called *Sadh* confined to the Jats which has made some little progress in the Tract two whole villages having entered it It was founded by one Ude Das and its head quarters are at Farrukhabad The sectarians are free thinkers and as they can see no gods worship none Their only cere

* In s me c s th B hm w ll t to be f d th n m f a d ty when they will n t t k offe gs made t h s hn A d th y ll some ll ges ll w th *g l* t t k th ff n g f f th y d q en e t d es n t m tter m ch Boy re m l able nd m st n t n the r k

† S m t s ggest rt cle th W tm ste R w f J n y 1875 ll d The F st M t ll g t

monial consists in large public dinners, especially on the Puran Máshi festival. They abjure tobacco and affect special personal cleanliness. They only marry and eat with one another, but they give their daughters to other Jats.

358. Shrines.—Temples proper are built only to Vishnu and Shiv, and hardly ever by the villagers, who content themselves with making small shrines to the local deities. The ordinary Hindu shrine must face the east. It is ordinarily built in the shape either of a rectangular prism capped by a pyramid, or of a cylinder with a bulbous head and pointed finial, and is often only some 12 inches square. It is often surmounted by an iron spike (*sink*). It is generally hollow, with a small door-way in front and at the bottom. The Mahomedan shrine faces the south, and is in the form of a grave with niches for lamps, and often has flags (*dhaja*) over it. If the shrine of a dead Musalman is large enough to go into, you must be careful to clap your hands (*táli bajána*) before opening the door, as these gentry sometimes sit on their tombs in their bones to take the air, and have been discovered in that condition, an occurrence which they resent violently. Not unfrequently a tree, generally a *pípal* or *jand*, takes the place of a building; or even merely a fixed spot called *thapwa*. In two villages the distinction between the two classes of shrines has given rise to delicate questions. In one a branch of the family had been converted to Islam after the settling of the village; and when it was proposed to erect a shrine to the common ancestor, who was of course a Hindu, there was much dispute about the form to be adopted. The difficulty was overcome by building a Mahomedan grave facing the south, and the Hindu shrine over it with the door to the east. In another village an Imperial trooper was once burnt alive by the shed in which he was sleeping catching fire. He was originally a Musalman; but he had been burnt and not buried, which seemed to make him a Hindu. After much discussion the latter opinion prevailed; and a Hindu shrine, with an eastern aspect, now stands to his memory.

359. Modes of Worship.—The most ordinary form of worship is a salutation made by joining the hands palm to palm, and raising them to the forehead (*dhok márna*). A villager does this whenever he passes the shrine of a village deity. This I shall call salutation. In one village the mason who built the new common room, threw in, as a thankoffering for the completion of the work, a wooden Englishman who still sits on the top of the house; and though the rain has affected his complexion much for the worse, the people always salute him on coming out of their houses in the morning. There is also *chuchkárna* which consists in touching first the object to be worshipped, and then the forehead, with the right hand. This I shall call obeisance. Another form of worship is to scoop out a little hollow in the earth by

Possession Divination and Exorcism

the shrine and fling the soil on to a heap * This is called *matti kadna* and seem very much analogous with the common custom of flinging stones on to a cairn It is practised chiefly in honour of ancestors and fairies and I have seen heaps of mud raised in this way by a shrine to a height of 8 feet The person doing this will often say to the god I will dig you a tank and perhaps the custom has its origin in the honour attachable to the maker of a tank in this thirsty land but it is equally possible that this is only a local explanation of a custom brought from a more stony country and the origin of which has been forgotten for hundreds of our villager have never seen a stone in their lives.

360 Offerings.—Offerings (*charhawa*) generally take the form of a little gram or milk or cooked food or a few sweetmeats offered in front of the shrine in small saucers or jars the remainder of the offering being given to the appropriate receiver Libations are not uncommon and a white cock is sometimes killed And in many cases Brahmans are simply fed in the name of the god Offerings of cooked food may be divided into two classes To the benevolent gods or to ancestors only *pakki roti* that is cakes or sweets fried in *ghi* may be offered while to the malevolent and impure gods *kachhi roti* generally consisting of *churma* or stale bread broken up and rolled into balls with *gur* and *ghi* is offered Brahmans will not take the latter class of offerings Special forms are described when I speak of the deity to whom they appertain

Vows (*kabul*) are common the maker promising to build a shrine or feed so many Brahmans in the event of his having a son or recovering from illness or the like

361 Possession, Divination and Exorcism—When a villager is ill the disease is generally attributed to the influence (*opri japet*) of a malevolent deity or of a ghost (*bhut*) who has possessed him (*lipat* or *chipat* or *pilach jana*) Recourse is then had to divination to de

a class of

ercise the

generally

a snake god or Saiyad

The power is apparently confined to the menial (aboriginal ?) castes is often hereditary and is rarely possessed by women it is shown by the man wagging his head and dancing and he generally builds a shrine to his familiar before which he dances When he is to be consulted which should be at night the inquirer provides tobacco and music The former is waved over the body of the invalid and

* In the Pu j b tl l p f m l fl g p mem y of deceas l ce t a ll d *j tl* from *jeth* a l b d el l l ll e

given to the *bhagat* to smoke, and the music plays, and a *ghi* lamp is lighted, and the *bhagat* sometimes lashes himself with a whip, under which influences the soothsayer is seized by the afflatus, and in a paroxysm of dancing and head wagging, states the name of the malignant influence, the manner in which he is to be propitiated, and the time when the disease may be expected to abate Another mode of divination is practised thus The *syána* will wave wheat or *jawár* over the patient's body, by preference on Saturday or Sunday, he then counts out the grains one by one into heaps, one heap for each god who is likely to be at the bottom of the mischief, and the deity on whose heap the last grain comes is the one to be appeased The waving the grain or tobacco over the patient's body is called *chuána*, the counting the grains, *kewali*

362 The malignant deity is appeased by building him a new shrine, or by offerings at the old one Very often the grain to be offered is put by the head of the sufferer during the night and offered next day, this is called *oria* Or the patient will eat some and bury the rest at the sacred spot, or the offerings will be waved over the patient's head (*wárna*) before being offered, or on some moonlight night while the moon is still on the wax, he will place his offering with a lighted lamp on it at a place where four roads meet, this is called *langri* or *nagdi* Sometimes it is enough to tie a flag on the sacred tree, or to roll on the ground in front of the shrine, or to rub one's neck with the dust of it Boils can often be cured by stroking them with a piece of iron and repeating the name of the deity concerned Witchcraft proper (*jádú*) is principally practised by the lowest castes, and you hear very little of it among the villagers

363. Vishnu, Ram, Narain—The people of the Tract are Vaishnavas, though Vishnu is hardly recognized by them under that name But under the name of Rám and Nárain he is the great god of the country Temples to him (*thákurdwára*) exist in several of the larger villages, generally built by Brahmans or Bairagis, and almost always insignificant He is worshipped under the name of Ram by Rajputs only, under the name of Nárain by other castes On the 11th of Kátik or *gyás devuthni*, when the gods wake up from their four months' sleep (§ 399 *infra*) Brahmans are fed in his name, and on the 8th of Bhádon (*Janamashtmi*), such villagers as have fasted, which no man working in the fields will have done, will generally go to the *thákurdwára* and make an offering And on some Sunday in Bhádon they will feed a few Brahmans in his name Brahmans and Bairagis take the offerings

364. Shiv, Mahadev.—Shiválas are not at all uncommon in the villages, built almost without exception by Banyas The priests are *gosains* or *jogis*, generally of the *kanphate* or ear-pierced clan,[1] and

364 [1] H T i, 255ff, 259, 262 H S 130ff, 177

they take the offerings No Brahmans can partake of the offerings to Shiv or be priest in his temple though they will worship him and sometimes assist in the ceremonies thus deviating from the strict rule of the original cult[2] On the Sheoratri on the 13th of Sawan and Phagan such people as have fasted will go to the Shivala but it is seldom entered on any other days

365 Suraj Devata or the Sun god —*This is the god whom the people chiefly delight to honour Any villager if asked whom* he worships most will mention him No shrine is ever built to this god Sunday is of course the day sacred to him On Sunday the people do not eat salt nor do they set milk for *ghi* but make it into rice milk of which a part is given to the Brahman in honour of the Sun and a lamp is always burnt to him on Sunday Brahmans are fed every now and then on Sunday in his name and especially on the first Sunday after the 15th of Sarh when the harvest has been got in and the agricultural year is over Before the daily bath water is always thrown towards the Sun (*argh*) * and every good man when he first steps out of doors in the morning salutes the Sun and says *dharm ko sahai rakhye suraj maharaj* or keep me in the faith oh Lord the Sun ! Brahmans take the offerings

366 The Jamna—After the Sun comes the River Jamna always spoken of as *Jamna Ji* and so honoured that even when they complain of the terrible evils brought by the canal which is fed from the river they say they spring *Jamna Ji ki dosti se* from Lady Jamna s friendship There are no shrines to the Jamna but the people go and bathe in the river or if unable to go so far the canal on the *mekhs* or *sakrants* in Chet and Katik on the Dusahra of Jet and on the 15th of Katik or every day in that month if near enough And Brahmans are constantly fed on Sunday in honour of *Jamna Ji* and take all offerings

367 Dharti Mata or Mother Earth —Every morning when a man first gets off his bed he does obeisance to the earth and says *sukh rakhiyo Dharti Mátá* preserve me Mother Earth When a cow or buffalo is first bought or when she first gives milk after calving the first five streams (*dhar*) of milk are allowed to fall on the ground in her honour and at every time of milking the first stream is so treated So when medicine is taken a little is sprinkled in her honour So at the beginning of ploughing and sowing obeisance is made to her and she is invoked

368 Bhumia or the God of the Homestead —The Bhumia should from his name be the god of the land and not of the homestead But he is in these parts emphatically the god of the homestead

364 B r 8ff

* Th s d to th new m to n tl e g f h ppe c f n th nk f t

or village itself, and is indeed often called *Khera* (a village) and *Bhúmia* indifferently In one or two villages a god called *Bhairon* or *Khetpál* (field-nourisher) is worshipped, but as a rule he is unknown

When a new village is founded, the first thing of all is to build a shrine to Bhúmia on the site selected Five bricks are brought from the *Bhúmia* of the village whence the emigrants have come, three are arranged on edge like the three sides of a house, the other two are put over them like a gable roof, an iron spike is driven in, five lamps are lighted, five *laddús* are offered, Brahmans are fed, and the shrine built over the whole In many cases, where two villages had combined their homestead for greater security against the marauders of former days, the one which moved still worships at the *Bhumia* of the old deserted village site

Bhúmia is worshipped on Sunday They burn a lamp and offer a cake of bread at the shrine, and feed Brahmans This is always done twice a year, after the harvests are gathered in, and also on other occasions Bhúmia is also worshipped at marriages, and when a woman has had a son, she lights lamps and affixes with cowdung five culms of the *panni* grass, called *beran*, to the shrine So too the first milk of a cow or buffalo is always offered to Bhumia Women commonly take their children to worship Bhúmia on Sunday The shrine is very usually built close to the common room, and the only villages I know of in which there is not one are held wholly by Saiyads Brahmans take the offerings

369. Khwaja Khizr, the Water-god —The local god of water, though the name really belongs to one of the Mahomedan prophets whose special duty it is to take care of travellers He is worshipped more in the Khadir than in the Bangar, and especially on Sunday Twice a year after the harvests he is worshipped at the well, lamps being lighted and Brahmans fed And on the festivals of Holi and Diwali, a raft called *langri* is made of the *beran* just mentioned, and a lighted lamp put on it and set afloat on the tank in his honor The ceremonies attending the building a well are described in § 404 *infra* Brahmans take the offerings to Khwája Khizr, though they are occasionally given to the water-carrier or *Jhinwar*

370 Pitr or Ancestors —Among the Gujars especially, tiny shrines to the ancestors are common all over the fields, and among other castes they will be found in every village Occasionally the shrine is to the gentile ancestor, and built upon a brick brought from his shrine at the place of origin, as with the Jaglan and Saudu Jats Mud is always flung up to these shrines And all the people feed Brahmans in honour of their ancestors on the 15th of the month (*mawas*), and especially in the *kanagat*, or the 16 days previous to and includ-

ing the *mawas* of *Asauj* which are specially sacred to the *pitr* Cattle are never worked on *mawas*

371 Sattis —There are a great number of *sattis* or places where widows have been burnt on their husbands pyres all over the country They are generally marked by shrines much larger than any other kind being 3 or 4 feet square Lamps are lit and Brahmans fed at them on the 11th or 15th of Katik In one case Tagas who had emigrated from their old village used yearly to come more than 40 miles to offer at their old *satti* till quite lately when they took away a brick from the *satti* and used it as the foundation of a new *satti* at their present village which answered all purposes This is always done in the event of emigration Brahmans take the offerings

372 The Gyals or sonless dead —When a man has died without a son (*ut n iput jana*) he becomes a *gyal* or *ut* and is particularly spiteful especially seeking the lives of the young sons of others In almost every village small low platforms (*bhorka bauka*) with saucer like depressions in them are made to the *gyals* and on the *ma vas* and especially on Diwali or the *ma was* of Katik (but *not* in the *kanagat* which is sacred to the *pitr*) the people pour Ganges water and cows milk into these saucers and light lamps and feed Brahmans and dig mud by them I think it is more than probable that *bhorkas* are identical in origin and signification with the cup marks which have so puzzled antiquaries [1] Brahmans take the offerings Young children often have a rupee hung round their necks by their mothers in the name of the *gyals*

373 The Sitala or Small pox group —The pustular group of diseases is supposed to be caused by a band of seven sisters of whom Sítala or Mata the goddess of small pox is the greatest and most
asáni Basanti Máha Mai *
little one who goes in front
takes in a village is that of
thers for the sisters of whom
the people will know the name of only one or two Basanti is a new addition to the group the disease having quite lately come from the hills They are sometimes called Sari Sitala Mai Masani Bari Basanti and so forth The people profess to distinguish the disease due to each but I have been quite unable to find out what they are except small pox which is undoubtedly due to Sitala

374 There are seven principal shrines to these deities at Pátri Kábri Beholi and Siwa of this district Bidhlun near Bhatganw

[1] J A.S B 1877

* Th s s pr p ly me f D vi wh dri p opl d nd wo h pped by some b t not ry ge e ally o the 8th f Chet d A j

Budhana near Jhajjar, and at Gurgaon itself They are never worshipped by men, but only by women and children of both sexes up to the age of 10 or 12 Enormous crowds collect at these shrines on the 7th of Chet which is called *síl* or *síll sáten*, or Sítala's 7th Besides this, *Phág* or *Dolendhi*, the day after the Holi festival, is a favourable day, and any Monday, especially in Chet or Sarh Sítala rides upon a donkey, and gram is given to the donkey, and his master the potter, at the shrine, after having been waved over the head of the child Fowls, pigs, goats, cocoanuts, and *chúrma* are offered, and eaten by sweepers and Hindu *Jogis*, and white cocks are waved and let loose An adult who has recovered from small-pox should let a pig loose to Sitala, or he will be again attacked

375 During an attack no offerings are made, and if the epidemic has once seized upon a village all offerings are discontinued till the disease has disappeared, otherwise the evil influence (*chhot*) will spread But, so long as she keeps her hands off, nothing is too good for the goddess, for she is the one great dread of Indian mothers She is, however, easily frightened or deceived, and if a mother has lost one son by small-pox, she will call the next *Kúrra*,* he of the dunghill, or *Baharú*, an outcast, or *Mara*, the worthless one, or *Bhagwána*, given by the great god So, too, many women dress children in old rags begged of their neighbours, and not of their own house, till they have passed the dangerous age

376 The Saiyads (Shahids) or Martyrs—The country is covered with small shrines to Musalman martyrs, properly *Shahids*, but called Saiyads by the villagers There was a Raja Tharú in the Nardak, after whom several villages are still called Tharwa, and who dwelt in Hábri He used to levy seignorial rights from virgin brides One night the daughter of a Brahman suffered thus Her father appealed for help to Míran Sahib, a Saiyad, who collected an immense army of Saiyads, Mughals, and Pathans, and vanquished the Raja The fight extended over the whole country to Delhi, and the Saiyad shrines are the graves of the Musalmans who fell But a favourite prescription in sickness is to build a shrine to a Saiyad, whose name is often not even given, and when given, is almost always purely imaginary, so that the Saiyad shrines are always being added to, and most of them are not connected with any actual person Lamps are commonly lit at the shrines on Thursdays, but offerings are seldom made except in illness or in fulfilment of a vow, they often take the form of a fowl or a goat, or especially a goat's head (*siri*), and they are taken by Musalman *faqirs* Saiyads are very fond of blue flags One of the Imperial kos *minars* or milestones has been transferred into a Saiyad's shrine by the people of Karnal city, and every Thursday evening there are worshippers, and *faqirs* to profit by them The

* Compare Twopenny, Hurdlemérs, &c

Guga Pir

Saiyads are very malevolent and often cause illness and death. One Saiyad Bhura who has his shrine at Bari in Kaithal shares with Mansa Devi of Mani Majra the honour of being the great patron of the thieves in this part of the Punjab and a share of the booty is commonly given to the shrine. Boils especially are due to them and they make cattle miscarry.

377. The Singhs or Snake gods.—There are a group of *Nagans* or female Snake deities known as Singhs by the people and especially called *Deotis* or godling. They are almost always distinguished by some colours and the most commonly worshipped are *Kali Hari* and *Buri* Singh or black green and brown. But here again the *Bhagat* will often direct a shrine to be built to some Singh whom no one has even heard of before and so they multiply in a most confusing way. They are servants of Raja Básak Nag King of Patál or Tartarus. Dead men also have a way of becoming snakes—a fact which is revealed in a dream when a shrine must be built. Their worship extends all over the district and is practised by all castes but most of all by Gujars and in the Khadir. If a man sees a snake he will salute it and if it bite him he or his heir as the case may be will build a shrine on the spot to prevent a repetition of the occurrence. But independently of this most villages have shrines to them. Sunday is their day and also the 9th of Bhadon in particular when most people worship them. Brahmans do not mind being fed at their shrines but will not take the offerings which go to Hindu *Jogis*. Both men and women worship them especially at weddings and births and offer *churma* and flags (*dhaja*). They cause fever but are not on the whole very malevolent and often take away pains. They have great power over milch cattle the milk of the 11th day after calving is offered to them and libations of milk are very acceptable to them. They are certainly connected in the minds of the people with the *pitrs* or ancestors though it is difficult to say exactly in what the connection lies. Wherever the worship of the *pitrs* is most prevalent there the snake gods also are especially cultivated. The snake is the common ornament on almost all the minor Hindu shrines.

378. Guga Pir.—*Guga* or *Jahir Pir* or *Bagarwala*[1] though a Musalman is supposed to be the greatest of the snake kings. He is buried near Hissar but is worshipped throughout the Tract.

The 9th and 15th of Bhádon especially the former are his days and generally the 9th of any month and also Mondays. His shrine is usually a cubical building with a minaret on each corner and a grave inside. It is called a *mari* and is marked by a long bamboo with peacock plumes a cocoanut some coloured thread and some

378 N W P 255ff

hand-pankhas (*bijna*) and a blue flag on the top This is called his *chhari* or fly flap, and on the 9th of Bhádon the *Jogis* take it round the village to the sound of drums, and people salute it and offer *churmas* He is not malevolent, and the loss of respect which his good nature causes him is epitomised in the saying—*Gúga beta na dega tau kuchh na chhin lega* —" If Gúga doesn't give me a son, at least he will take nothing away from me" He is associated by the people with the five *Pirs*, who occasionally have shrines in the villages

379. The Nuris or Fairies.—These are a somewhat vaguely-defined class of malevolent spirits, who attack women only, especially on moonlight nights, giving them a choking sensation in the throat and knocking them down (? hysteria) Children, on the other hand, they protect They seldom have shrines built to them, but a tree or a corner by a tank is generally sacred to them, and here mud is flung to them They are Musalman, and are apparently the same as the *Parind* or *Peri*, being also known as *Shahpuris*, but they resent being called so, and no woman would mention the word *Churmas* are offered to them on Thursday evening by women and children, and taken by Musalman *faqirs*, or sometimes by *Jogis* or sweepers, and they are worshipped at weddings The middle of Chet, too, is a common time for offerings to them

380 Minor Saints.—The local saints are innumerable, many villages having shrines to names never heard of elsewhere, often those of people killed in the village I mention below a few of the most celebrated saints worshipped in the Tract

381 *Mírán Sahib* was a Saiyad of Baghdad, of whom many wonderful stories are told He is often said to be the same as Hazrat Piran Pir of the Punjab, but this seems very doubtful He led the army described in § 376, and had his head carried off by a cannon-ball during the battle But he did not mind a bit and went on fighting Then a woman in one of Raja Tharwa's villages said "who is this fighting without his head?" Upon which the body said—"*Haqq, haqq*," and fell down dead But as he was going to fall he said—"What! Aren't these villages upside down yet?" Upon which every village belonging to, and called after Raja Tharwa throughout the country was turned upside down, and all their inhabitants buried except the Brahman's daughter The walls are still standing upside down to convince you Mírán Sahib was buried in Hábrí, and is commonly invoked and worshipped by the Nardak people, as also his sister's son Saiyad Qabír They have a joint shrine called Mámú-bhánja (uncle and nephew) in Sunpat

382 *Lakhdáta* or *Sakhi Sarwar* is a Punjab saint chiefly worshipped by Gujars and Rajputs On *Saluno*, the last day of Sáwan, the women paint his picture on the wall, and the Brahmans bind a

Ghosts or Bhuts

sacred thread on the wrist He is also called *Rohtin wali* or *Sakhi Sultán* or *Sálana wala*

383 *Baba Farid Shakarganj* of Pák Patan in Montgomery is also honoured by the people and has a shrine at Ghogripur where crowds of people offer to him after the spring harvest

384 *Boali Qalandar* a contemporary of Bábá Farid is a very celebrated local saint He used to ride about on a wall at Burha Khera but eventually settled at Panipat He prayed so constantly that it became laborious to get water to wash his hands with each time so he stood in the Jamna which then flowed under the town After standing there seven years the fishes had gnawed his legs and he was so stiff that he could hardly move So he asked the Jamna to step back seven paces She in her hurry to oblige the saint went back seven *kos* and there she is now He gave the Panipat people a charm which dispelled all the flies from the city But they grumbled and said that they rather liked flies so he brought them back a thousand fold I fancy the people have repented since He died at Burha Khera and there was a good deal of trouble about burying him He was buried first at Karnal but the Panipat people claimed his body and opened the grave upon which he sat up and looked at them till they felt ashamed They then took away some bricks from the grave for the foundation of a shrine but when they got to Panipat and opened the box they found his body in it so he now lies buried both at Panipat and at Karnal There is also a shrine to him at Burha Khera built over the wall on which he used to ride His history is given in the Ayín Akbari[1] He died in 724 Hij

385 *Naugazahs* or graves of saints said to be 9 yards long are not uncommon They are certainly of great length

386 *Adlu Sayad* the family saint of the Kahár Rajputs at Panipat is a great worker of wonders and if one sleeps near his shrine he must lie on the ground and not on a bedstead or a snake will surely bite him If a snake should under any other circumstances bite a man in the Kahar's ground no harm will ensue to him

387 **Ghosts or Bhuts**—In § 344 I explained that the spirit after death undertook a year's travels as a *paret* But if at the end of that time he does not settle down and enter upon a respectable second life he becomes a *bhut* or if a female a *chural* and as such is an object of terror to the whole country His principal object then is to give as much trouble as may be to his old friends possessing them and producing fever and other malignant diseases People who have died violent deaths (called *ghazlmard* or *apgat*) are specially

likely to become *bhúts*, hence the precautions taken to appease the Saiyads and others in like case with them In many villages there are shrines to people who have been killed there Sweepers, if carelessly buried mouth upwards, are sure to become *bhúts*, so the villagers always insist upon their being buried face downwards (*múndha*), and riots have occurred about the matter, and petitions have been presented to the Magistrate The small whirlwinds that raised pillars of dust in the hot weather are supposed to be *bhúts* going to bathe in the Ganges

Bhúts are most to be feared by women and children, and especially immediately after eating sweets, so that if you treat a school to sweets, the sweetseller will also bring salt of which he will give a pinch to each boy to take the sweet taste out of his mouth They also have a way of going down your throat when you yawn, so that you should always put your hand to your mouth, and had also better say Náráin afterwards

388 **Omens and Charms**—The people are very observant of omens (*sagún*) The following verse gives some of the principal ones —

Kaga, miriga, dahine, bain bisyar ho,
Gaiyi sampat baore, jo garin dahine ho

"Let the crow and the black buck pass to the right, the snake to the left If a mantis is to the right you will recoup your losses"

A mantis is called the horse or cow of Rám, is always auspicious, especially on Dusahra, and the villager will salute one when he sees it Owls portend desolate homes Black things in general are bad omens (*kasaud*), and if a man wishes to build a house and the first stroke of the spade turns up charcoal, he will change the site On the other hand, iron is a sovereign safeguard against the evil eye While a house is being built there is always an iron pot (or a ghara painted black is near enough to deceive the evil eye) kept on the works, and when it is finished the young daughter of the owner ties to the lintel of the door a kangna, consisting of an iron ring (*challa*) with other charms, and her father gives her Rs 1-4 for doing it Till then the house is not inhabited The same *kangna* is used at weddings and on other occasions A *koil* is especially unlucky Chief among good omens (*saod, saon*) is the *dogar*, or two water pots, one on top of the other It should always be left to the right

389 Charms are in common use The leaves of the *siras* are especially powerful, and after them, those of the mango They are hung up in garlands with a mystic inscription on an earthern platter in the middle, and the whole is called a *totka* The *jand* is another very sacred tree In illness it is a good thing to have an inscription made on an earthen vessel by a *faqir*, and to wash it off and drink the

Superstitions

water So in protracted labour the washings of a brick from the fort *Chakabu* of Amin near Pehoa[1] are potent or if any body knows how to draw a ground plan of the fort the water into which the picture is washed off will be equally effective as a potion

390 Superstitions.—Of course the superstitions of the people are innumerable Odd numbers are lucky *Numero Deus impare gaudet*[1] But three and thirteen are unlucky because they are the bad days after death so that *tera tin* is equivalent to all any how And if a man not content with two wives wish to marry again he will first marry a tree so that the new wife may be the fourth and not the third So if you tread on a three year old pat of cowdung you lose you way to a certainty The preference for the number 5 and less markedly for 7 will have been apparent throughout the foregoing pages An offering to a Brahman is always 1¼ 2½ 5 7½ and so on whether rupees or seers of grain The dimensions of wells and parts of wells and their gear on the other hand are always fixed in so many and three quarter hands not in round numbers The tribal traditions of the people and those concerned with the numbers and areas with chiefs wives and sons and with villages swarm with the numbers 12 24 16½ 52 84 and 360[2]

391 Hindus count the south a quarter to be especially avoided for the spirits of the dead live there Therefore your cooking hearth must not face the south nor must you sleep or lie with your feet towards the south except when you are about to die

392 To sneeze is auspicious as you cannot die for some little time after So when a man sneezes his friends grow enthusiastic and congratulate him saying *satan jiv*— live a hundred years or *chhikpidi* a name of Devi who was sneezed out by Brahma in the form of a fly

393 It is well not to have your name made too free use of especially for children They are often not named at all for some little time and when named are often addressed as *bugi* or *bugi* according to sex If a man is wealthy enough to have his son s horoscope drawn the name then fixed will be carefully concealed till the boy is 8 or 10 years old and past danger And even then it will not be used commonly the every day name of a Hindu being quite distinct from his real name given in his *janampatri* or horoscope At his marriage however the real name must be used

394 A Hindu will not eat and often will not grow onions or turnips nor indigo for simple blue is an abomination to him Nor will a villager eat oil or the black sesame seed if formally offered him by another for if he do he will serve the other in the next life Thus

389 A S 1 2 3 A G 337
390 V g l Ed 75 N W P ii 47ff 54ff

Fasts and Festivals

if one ask another to do something for him the latter will reply — "*kyá, main ne tere kale til chabe hain*" "What! Have I eaten your black sesame?"

Sacred groves (*talaI*) are not uncommon, and any one who cuts even a twig from them is sure to suffer for it They exist in some of the villages where wood is most scarce, but are religiously respected by the people

395 The Banyas of the Tract have a curious superstition which forbids the first transaction of the day to be a purchase on credit It must be paid for in cash, and is called *bohni*

396 The age of miracles is by no means past In 1865 a miraculous bridge of sand was built over the Jamna in this district at the prayer of a *faqir*, of such rare virtue that lepers passing over it and bathing at both ends were cured A good many lepers went from here to be cured, but the people tell me that the bridge had "got lost" when they got there

397 **Fasts and Festivals**—Of course the greater number of the village festivals and the observances appropriate to them are common to all Hindus But some of them are peculiar to the villages, and a description of them will not be out of place here

398 The ordinary Diwáli is on the 14th of Kátik, and is called by the villagers the little Diwáli On this day the *pitr* or ancestors visit the house But the day after, they celebrate the great or *Gobardhan Diwáli*, in which Krishna is worshiped in his capacity of cowherd, and which all owners of cattle should observe On the day of the little Diwáli the whole house is fresh plastered At night lamps are burnt as usual, and the people sit up all night Next morning the housewife takes all the sweepings and old clothes in a dust pan, and turns them on to the dunghill, saying "*daladr dúr ho*," *daladr* meaning thriftless, lazy, and therefore poor [1] Meanwhile the women have made a *Gobardhan* of cowdung, which consists of Krishna lying on his back surrounded by little cottage loaves of dung to represent mountains bristling with grass stems with tufts of cotton or rag on the top for trees, and little dung balls for cattle, watched by dung men dressed in bits of rag Another opinion is that the cottage loaves are cattle, and the little balls calves On this is put the churn-staff and five whole sugarcanes, and some parched rice and a lighted lamp in the middle The cowherds are then called in, and they salute the whole and are fed with parched rice and sweets The Brahman then takes the sugarcane and eats a bit, and till that time nobody must cut, or press, or eat cane Parched rice is given to the Brahman, and the bullocks have their horns dyed, and get extra well fed

398 [1] N W P i, 241

Fasts and Festivals

399 Four days before the *Diwáli* or on the 11th of Kátik is the *gyás dev uthni* on which the gods wake up from their four months sleep beginning with the 11th of Sárh and during which it is forbidden to marry to cut sugarcane or to put new string on to bedsteads on pain of a snake biting the sleeper On the night of this day the children run about the village with lighted sticks and torches

400 On the 15th and 11th of Phágan the villagers worship the *aonla* tree or phyllanthus emblica mentioned by Huen Tsang as being so abundant beyond Delhi This tree is the emblic myrobolus a representation of the fruit of which is used for the final of Buddhist temples[1] Its worship is now connected with that of Shiv Brahmans will not take the offerings The people circumambulate the tree from left to right (*prikamma*) pour libations eat the leaves and make offerings which are taken by the *Kanphate* Jogis

401 Fasts are not much observed by the ordinary villager except the great annual fasts and not even those by the young man who works in the fields and who cannot afford to fast *Gur* flour made from *singhára* or water calthrop from the *sán ṭak* grain wild swamp rice the seeds of cockscomb (*chaulai*) and milk in fact almost anything that is not included under the term *náj* or grain may be eaten on fasts so that the abstinence is not very severe

400 St J i 207 N W P ii 217

CHAPTER X—AGRICULTURAL APPLIANCES

402 Soils.—The three main kinds of soil, *dákar*, *rausli*, and *bhúr* have been described in § 4 Of these, *bhúr* is by far the least valuable, in fact, in all the early reports it is described as unculturable The yield is always poor, and if there is much rain, the soil becomes so soft that the crops fall down At the same time it is cool, and retains its moisture for a long time, and when the covering of sand is thin and overlies better soil, which is only very occasionally the case, very good crops are produced

403. *Dákar* is terribly stiff and hard to work, and will yield nothing without water But when there is plenty of that, it gives splendid rice and gram crops, one after the other, in the same year As a soil *dakar* is inferior to the fertile and more tractable *rausli* But where there is no irrigation, its position in all the hollows and drainage lines gives it great advantages, as whatever rain water there is collects on the *dakar*, and it will give crops in seasons when those in other soils fail for want of water In the canal tract, on the other hand, where water is plentiful and swamp only too frequent, this very position is a drawback instead of an advantage

404 Well Sinking—As a well must be begun on a Sunday, on Saturday evening five small vessels full of water called *bhoha* are put out in various spots near where the well is to be, and a lighted lamp is put by each Next morning that spot is selected for the well where the vessel has lost least water by evaporation A circle is formed to limit the excavation, and digging is begun so as to leave the central clod with its tuft of grass undisturbed When the clod is a fair height they cut it off at the bottom and bring it out whole, they call it *Khwája ji*, salute it, and feed Brahmans to it If it breaks the omen is bad, and the site is abandoned, but I understand that if the water omen gives any very marked result in favour of the spot, they "take great care of *Khwája ji*" The pit is dug out till water begins to soak in, a well curb (*nímchak*) is then made of 12 felloes (*gadwala*) bound together with iron *Dhák* is the best wood, after that *gúlar* The carpenter takes Re 1 for every hand (18 inches) in the breadth of the well, the iron costs Rs 10, and the wood Rs 6 All the friends from the whole *thappa* are collected, the *nímchak* is lowered with great ceremony and many invocations of Narain and Khwaja ji, and *gur* is divided The cylinder of the well (*koti*) is then built up on the curb to a height of 10 or 12 feet above the ground level A platform is

Well Sinking

made on the top and it is weighted with earth a winch is set up and a sort of pile driver A dredge (*jhámb*) is then worked at the bottom of the well within the cylinder the pile driving it in and the winch lifting it up The operation is superintended by skilled divers (*chai kan dibolia* or *dubkiri*) usually Jhinwars who fill the mud and slush in to basket in which it is raised to the top As the earth is dug out the cylinder sinks and is if necessary built up now and then

405 The water bearing strata in the Bangar are popularly fixed at 24 32 and 52 hands of 18 inches each from the surface The two upper are covered and the lowest is supported by a pan (*girh*) of clay and below the two upper ones and above the lowest one lies blue sand in which water is found A permanent supply of spring water is called *bum* mere soakage water is called *sír* The *báiani* or lowest stratum holds the real spring water and a well that reaches it is called *sultani* The two upper supplies fail in droughts and the highest even if the canal stops for a time. In the Khadir of course there is no spring water and close to the canal the soakage (*choa*) is so great that wells cannot be sunk to any depth while for the same reason the *báiani* cannot be reached at all in the canal tract.

406 When the pan which the well is meant to tap is reached the pile is driven through the pan so as to pierce it and the water rushes up If the well is once carried so far as to pass through the clay into the sand it must be carried on to the next pan otherwise it will eventually fill up with the sand or even break with its own unsupported weight. When the supply seems satisfactory two leather buckets are rigged up and every effort made to exhaust the supply so as to test its permanency If they fail the well is practically finished The earth is filled in all round the upper part of the cylinder (*man*) is built up so as to give command of the surrounding fields and a gear put on A niche (*ali*) is left in which to burn lamps to Khwaja Khizr on Holi Diwali and Sunday and Brahmans are again fed The ceremony of marrying a well is usually performed by rich

In the Khadir

obtained and

407 A brick well for a single bucket or wheel is about 7 to 8 feet in diameter if for two about 11 to 12 feet. In the Khadir the single well will cost Rs 250 to Rs 325 in the Bangar Rs 350 to Rs 500 in the Nardak any price up to Rs 1 300 according to depth But of course a good deal of these amounts is on account of labour which *will not be actually paid for either that of the makers themselves* or of their friends in the village Of late years a new kind of brick has been introduced called *gadwála* It is very long and broad and thin and forms a small segment of an annular disk It has a tooth at one end and a notch at the other Wells are made of a single thickness of these built up dry without mortar They are cheap a well built of

Well-gear

them costing not more than a third as much as a good brick and mortar well But it will not last long, while the other will last at any rate 60 or 70 years, probably more

408. Unbricked Wells.—In the Khadir unbricked wells (*khú* or *kachha khúa*) are made by digging out the sand and lining the lower part, which is of greater diameter than the upper, with a lining (*jhal*) of woven withies of *jhao* or *simbhálú*, or *tunt* They are made in a few days, and at a cost of Rs 5 to Rs 10, spent in buying the lining, and feeding the friends who come to help in the digging after water is reached, which must be hurried on They fall in during the next rainy season Unbricked wells used to be made in the stiff Bangar soil, and lasted many years , but the soakage from the canal now renders it impossible to dig them

409. Well-gear—the Persian Wheel.—Throughout the Khadir, where the water is never more than 25 to 30 feet from the surface, the Persian wheel alone is used for irrigation Throughout the Bangar and Nardak, even if the water is near, the leather bucket is used on wells But wheels are used to lift canal water where necessary, and are then called *jalars*

The Persian wheel or *harat* consists of a horizontal cogged wheel driven by bullocks yoked to a beam (*gadal*) fixed to its vertical axis (*balaur*) This wheel gears into and drives a vertical toothed wheel (*chakli*), half of which is under ground, and the horizontal axle of which (*belan* or *lat*) projects over the well On this axle and over the well is fixed a vertical lanthorn wheel (*bar* or *od*) on which hangs the *mal*, a sort of rope ladder made of two side ropes and cross sticks To the cross sticks are tied the earthen vessels (*tíndar*) which raise the water As they come up they discharge the water through the lanthorn wheel into a water trough (*nisar*) inside the wheel, which, returning on itself twice at right angles, passes out of the wheel on the outer side, or that further from the centre of the well, where there are no spokes, and delivers the water into the cistern (*parcha*), whence it flows off by small channels (*khand*) to the fields But as they are tied rigidly on to the *mal*, they spill some of their water before they are over the water trough , and the waste of labour thus occasioned is very great The driving gear costs some Rs 15, and lasts 6 or 8 years The lanthorn wheel and subsidiaries cost about Rs 10 more, and only last about a year The *mál* is made at home, always of *dab*, which resists the action of water better than any other fibre The whole gear is said to include 360 separate pieces of wood, which enjoy some 70 or 80 separate names among them

410 The Rope and Bucket.—The leather bucket (*charas*) consists of a buffalo hide bag swung from an iron ring and handle (*mandal*) It is drawn up by a strong rope (*láo*) made of *san* fibre, and

passing over a small strong wheel (*bhon* or *chak*) fixed over the well The oxen who draw it run down an inclined plane (*gaun*) dug out by the side of the well the driver sitting on the rope to bring the strain more horizontal and return by a less steep incline parallel to it. When the bucket reaches the top the man who stands at the mouth of the well seizes the rope and pulls the bucket on to a masonry apron (*paurhar*) on which he stands He then bids the driver unloose the rope. This releases the bag which collapses and the water shoots into the cistern (*parchha*) The empty bucket is then flung into the well the rope being held under the foot to prevent it falling too quickly When the oxen reach the top the rope is fastened on again and the operation recommences The directions to the driver inter mixed with prayers for protection are delivered in a song the cadences of which the bullocks soon learn to recognise and stop turn and start of their own accord at the proper moment. In this song and there only the driver is called Kám and the bucket *bárd* The work at the well mouth is very dangerous as any mistake will precipitate the man into the well

The bucket costs Rs. 6 to 8 and lasts a year the iron ring and wheel Rs. 3 each The *lao* is made at home The bucket will lift 3 o to 400 pounds of water each time and there is no waste

411 The Sugar Press —The sugar press or *kolhu* consists of a stump of a *kikar* tree hollowed out and bound with iron and firmly fixed in the ground The hollow is lined with pieces of hard wood (*tori*) which are renewed when worn out and are so shaped as to form a large upper cavity for the reception of the pieces of cane and below that a small socket in which the ball of the crusher works The crusher (*lat*) is a long beam of *kikar* with a knot at the lower end which works in this socket and above that a conical shaped enlarge ment (*chaman*) which crushes the cane against the sides of the *kolhu* as it moves round in the cavity The beam to which the oxen are fasten ed (*pat*) has a curved bearing (*gali*) at one end which travels round a groove outside and at the bottom of the *kolhu* it is heavily weighted at the other end To it is fastened a connecting rod (*m inak thamla*) which projects upwards and is tied at the top to a flat piece of wood (*makri*) with a socket in its highest end Into this socket the top of the crusher fits Thus the weighted beam and the crusher form a system which is supported by the bearing of the *gali* against the outside and of the conical crusher against the inside of the press and as the system revolves round the press the cane is crushed by this

D d id t mad o l l I j le c ll n G d only at tl e well an l tw st their l llocks t l l p sp (N W l i 233)

latter bearing, and the juice runs down past the ball and socket joint, and passes out by a small hole at the bottom of the press The oil press has the same name and is identical in construction with the sugar press

412 The Cart—The ordinary village cart is made on the ordinary Indian pattern It is exceedingly small, costing Rs 20 to Rs 35, and is used for agricultural purposes only When used to carry manure, a *kiri* or basket work lining of cotton stems is put inside the framework to keep the contents from falling out It is always drawn by two bullocks, and will carry 10 to 15 maunds

413 The Plough—The plough consists of a wooden body (*hal*) with the bottom cut off horizontally, and the nose cut off nearly vertically The top of the body has a long peg in it which forms the handle and is held in one hand while the other is employed to twist the bullocks' tails It is drawn by a beam (*halis*) passed through a mortice in the middle of the body, which is fastened to a yoke (*júa*) consisting of a straight piece of wood which rests against the humps of the oxen, 4 small pegs keeping it from shifting laterally The coulter (*phálí*) passes through a mortice through the bottom and nose of the plough The share is of two different shapes The *panyári* is a broad cutting blade of wood passed through the same mortice with the coulter, and is used for stiff soil The *patha* is a thick, round, conical-shaped continuation of the nose let into a notch in the latter, and secured by the coulter which passes through it It is used for the light Khadir soil Both ploughs are ordinarily called *nág* ploughs, though the *panyári* plough is occasionally called *múnd* But the *múnd* or *lothan* is really a very large heavy plough drawn by large bullocks, and used only on the Rohtak border In the Khadir the share is shod with iron, otherwise the sand wears it out The plough should be all of *kikar* wood , and costs from Rs 1-12 to Rs 2

414 Minor Agricultural Implements—The other implements used by the cultivators are *sohágga*, a flat board of *kikar* or *jánd*, to which several bullocks are yoked The drivers stand on the board, and it is dragged over the field, crushing the clods It costs Re 1 to Rs 1-4 *Girri* or *úd*, a heavy wooden roller of *kikar* or *shisham* used for the same purpose, and costing Rs 10 to Rs 20 according to size *Jandra*, a flat board with or without small teeth, worked by two men, one holding the handle, and the other pulling it towards him with a string It is used as a rake for making the beds for irrigation (*kyári*) *Jera*, a pitchfork with 6 teeth of *kikar* or *kendú*, the handle being of *ber* or bamboo If with two teeth called *dosingha*, if with four *chausinghá* *Dinga*, a piece of wood bent at an angle with the short end sharpened, used for raking up and spreading out straw, &c A rake with long iron teeth called *dínga* or *phaora* is used, but not commonly *Kassi*, a spade

Cattle

costing Rs. 1-8. *[illegible]* a flat broad shovel costing Rs. 1-4. Both the above are set at right angles to the handle and used chopping fashion. *Kas'i* a tiny one handed *kasi* used as a hoe costs 3 annas. *Khurpa* a flat blade used for grubbing up weeds and grass costs 3 annas. *Dati* or *Dranti* a toothed sickle costing [illegible] annas. *Kulhari* an axe costing 8 annas to 12 annas. *Gandasa* a chopper consisting of a sharp heavy blade set in a back which forms a continuation of the handle and used for cutting up stalks of *jowar* &c. for fodder cost 8 annas. *Darati* a curved blade set in a flat board which is held under the foot while vegetables, &c. are sliced or put up against the blade costs [illegible] annas. *Ukhal* or *ukhli* a large mortar of *[illegible]* or the hill *[illegible]* or *[illegible]* used for husking rice costs 3 annas. *Musal* the pestle used with the above consisting of a heavy bar of *khair* or *[illegible]* some 5 feet long worked with both hands. The lower end is shod with an iron ferrule the edge of which projects beyond the wood and is rounded off. Thus it nips the rice grains between the round iron edge and the side of the mortar and squeezes the seed out of the husk not crushing it as it would do were the end flush with the wood. *Chhaj* a winnowing shovel shaped like a dust pan and made by *[illegible]* of the top joint of the culm of the *sarkanda*; it costs 2 annas. The cultivator will also have four or five broad flat baskets (*[illegible]*) made by *[illegible]* from withies (*[illegible]*) of *[illegible]* for carrying grain fodder or manure; several rope nets (*[illegible]*) for carrying fodder; some muzzles (*[illegible]*) of netted string for his cattle when thrashing or going to pasture; some *[illegible]* or leather whips; some *[illegible]* or leather thongs to tie the yoke to the plough; a *[illegible]* or a similar but larger thong for the cart; and a good supply of ropes and string called *[illegible]* or *[illegible]* or *[illegible]* and *[illegible]* or *[illegible]* as they decrease in thickness.

The implements for which no price is given are either made at home or furnished by the village menials as part of their *[illegible]*.

415. Cattle.—Agricultural work is entirely done by oxen. Male buffaloes are occasionally yoked in carts but very rarely indeed in anything else. In the light soil of the Khadir with water near the surface small cattle costing Rs. 20 to Rs. 25 each will do all that is needed. But for the stiffer soil of the Bangar plough cattle now cost Rs. 35 to Rs. 40 each while oxen that can do a full day's work on the deep wells of the Nardak cannot be got under Rs. 50 or Rs. 60 each. An ox begins work when rising 4 and works for 10 years.

For a bucket well eight oxen is the full complement, for a Persian wheel four. A plough is now always reckoned at two bullocks. It used to be reckoned at four but I think the change is due only to the greater sub-division of land owing to increased population as many of the agricultural accounts are kept by ploughs.

Fodder

416. Fodder—Fodder in general is called *nyár* The fodder of the autumn crops consists of the stalks of the great millets and of maize, which are carefully stacked on end in a stack called *chhor*, of rice straw which is merely piled up in a heap (*kunjra*), and of the *bhús*, or broken straw left after thrashing, of the pulses The spring crops give *bhús* only, also called *túrí* if of wheat or barley *Bhus* is stored in a *kúp* made of a whisp of straw (*thánda*) wound spirally round and round upon a foundation of cotton stems so as to form a high circular receptacle in which the *bhús* is packed and preserved, and thatched when full A long low stack fenced in by cotton stems alone is called a *chhán* or *bhusári* Near the city the people store their *bhús* in mud receptacles (*khuta*) and plaister it all around the top The *bhús* is taken out from a hole at the bottom as wanted Stems of millet and maize are chopped up into small pieces (*sáni* or *kútí*) before being given to the cattle

417 An ox during ordinary work will eat 20 seers of grass and a seer of grain daily, if working at the sugar mill or well bucket, nearly twice that The cost of stall feeding may be taken at about 2 annas a day Of course the fodder varies according to the season The mass of it consists of grass and straw of cereals, a little pulse straw is always added, and green food when obtainable In the cold weather *methi* and rape and carrots, and at all times the weedings, are given to the cattle Besides this some cotton seed or oil-cake, or either *gawár*, *moth*, or gram is daily given

The best fodder of all is the straw of the small pulses, and is called *missa*, after that, that of wheat and barley, called *túri*, after that the *jawár* stems or *chari*

418. Manure.—The dung-heap (*kurri*) is started when the rains are over A great hole is dug in the ground, and straw, cattle-bedding, sweepings of horse and cattle sheds, and all sorts of refuse are thrown into it During the rains the cow-dung is too wet to be patted up into fuel-cakes, and is all thrown on to the heap The rain is allowed to fall freely upon it, and it is periodically turned over and worked up by the sweepers As soon as the rains are over it is fit for use It is taken to the field in carts, sprinkled by the sweepers, and ploughed in Manure proper (*khar* or *khát kúra*) is not very often used as a top dressing But the market gardeners largely use the nitrous efflorescence (*rehi*) found about the village homesteads as a top dressing for young wheat The similarity of the name has led to statements that the injurious saline efflorescence or *reh* which covers so much of the country is used for manure This is not the case in Karnal *Reh* consists chiefly of sulphates, and is injurious, *rehi* of nitrates, which, of course, are the best of manures

Weeds, grass, and plant stems and roots which cannot be used as fodder, are generally burnt on the fields, and the ashes ploughed in

Hired Labour

419 Distribution of available Manure—The great object of the cultivator is to get enough manure for his sugarcane After that what is over is divided between fine rice cotton maize and the best wheat land but these crops
sugarcane when no fresh manure i
little used as the people say that n
scanty rainfall and very careless cultivation it only burns up the plants

420 Use of Dung as Fuel—The people are often abused as ignorant and careless because they use so much of their cow dung as fuel But they are quite as keenly alive to the value of manure as we are though they have not yet arrived at feeding for manure Of course wood fuel (*indhan*) is simply not obtainable in the Khadir and Bangar in anything like sufficient quantities But even where the supply is unlimited as in the Nardak it does not answer the purposes of the people In the first place the vessels of unglazed pottery in which all who are not rich enough to afford a complete stock of brass vessels cook their food will not stand well any fire fiercer than the smouldering one given by dung and in the second place the wood fire would need constant attendance What the housewife wants is a fire over which she can put her pot of *dal* or vegetables and go off to the fields or to the well or to spin in the alley feeling sure that the fire will smoulder on and gently simmer the food And dung gives her exactly what she wants

421 Hired Labour—Hired labour is made but little use of by the villagers except at harvest time The non cultivating Saiyad and the like however often cultivate by servants A labourer hired by the month or year is called *kamera* He gets 18 to 20 maunds of grain a year and his midday meal or Rs 3 a month or his board and 8 annas a month and often has some old clothes given him A lad will get Rs 2 a month and an old man who watches the crops Re 1 and food twice a day Labourers hired by the day are called *mazdurs* They get their midday meal and enough corn to give them grain worth about two and a half annas But in the press of harvest and specially in the cities wages often rise to 6 annas a day or more The young men of the Nardak when they have cut their early gram or rice flock down to the canal and riverain tracts for employment as harvest labourers

CHAPTER XI—AGRICULTURAL OPERATIONS

422 The Seasons—The calendar shown on the opposite page gives the way in which the agricultural year is divided As the Indian year consists of only 360 days, and an intercalary month is added every third year, the Indian months do not always correspond with the English ones given opposite them, but I have shown their average position

The year is divided into three equal seasons, the hot season or *kharsa*, including Phágan, Chet, Baisákh, and Jet, the rains or *chaumasa*, *barkha*, including Sárh, Sáwan, Bhádon, and Asauj, and the cold season or *syála*, including Kátik, Mangsir, Po, and Magh The two annual crops are known as *sáwani* for the autumn or *kharif* crops, and *sárhi* for the spring or *rabi* crops[1]

The agricultural or *fasli* year begins, according to the almanac, at the middle of Chet, but in practice the agricultural year begins with the day after *Dusahra*, or the 11th of the second half of Jet, on which date agricultural partnerships are formed for the ensuing year

Work begins with the first rains or, where irrigation is available, even before that Maize and cotton are sown, and a little early *jawar* sown and irrigated for the bullocks As soon as rain falls the land is ploughed up for the autumn crops When they are once sown they do not require very much attention, as most of them are not irrigated at all, and but seldom weeded But the cultivator is hard at work ploughing his land for the more valuable spring crops, and it is the amount of labour then expended on the ground that chiefly decides their outturn When it is too wet to plough, there are the banks and ditches to be looked to, cane to be tied up, and plenty of odd jobs to occupy the time With the cessation of the rains comes the busiest season of the year The land has to be finally dressed and sown with the spring crops, and the autumn crops have to be harvested During the cold weather the irrigation and weeding of the spring crops absorb most of the available labour, but if good Christmas rains

422. [1] N W P 1, 198 II

(*mahdaat*) set the bullocks free from the well land will then be ploughed for sugarcane tobacco and even for the autumn staples Irrigation is continued almost up to the spring harvest which generally comes with a rush all the crops ripening almost at once and labour at this season often fetches extraordinary prices When the spring crops are fairly garnered little can be done beyond finishing up the tobacco watering the cane sowing early maize and jawár for the cattle and getting in the maize and cotton and even this can only be done where irrigation is available Consequently this is a season of comparative leisure and the people occupy themselves the stars permitting in marrying themselves and their neighbours

423 The Weather —The east or cold damp wind (*parwa*) is the abomination of the cultivator It breeds especially when the weather is cloudy and the ground wet all sorts of pests and diseases animal and vegetable and the only point in its favour is that it does not dry the land and shrivel up the plants as the fierce west wind will do and that it is often the precursor of rain It is specially obnoxious when the pollen is ripe and the seed forming or about Asauj and Phagan

The west or hot dry wind (*pachwa*) on the other hand if it is not too strong is hardly ever unwelcome so long as there is plenty of rain for it does no harm beyond drying things up It is specially desirable when the plants are young as it forces them on and again when the pollen is ripe and the seeds forming and again when the crops are ripening but if too strong or too hot it is called *jholi* and blows off the pollen shrivels up the grain and blows down the plants while in autumn it dries up the moisture upon which the spring sowings depend After the spring crops the fiery hot wind cannot be too fierce or too continuous as it dries the grains and makes winnowing easy and best of all it presages a good rainy season

Rain can hardly be too plentiful in the autumn at any rate till the pollen forms While that is ripening rain washes it off and does much harm and again when the grain is ripening rain rots it and diminishes the yield But the injury is reduced to a minimum if a good west wind is blowing And rain after the crops are cut is especially injurious as the produce rots on the ground and even if the grain is saved at the expense of the straw the cattle suffer from want of fodder The ideal season is one in which rain falls early so as to allow the autumn crops to be sown over a large area and falls heavily at the end of the rains so as to
This last desideratum is (,
parikhiye air dhinu Ph
bhartar the season is tested in Mangsir cattle in Phagan (when they are pregnant) a wife when her husband is poor

Breaking up and Ploughing.

I have attempted, in the agricultural calendar with § 422, to show when rain or wind is desirable or not. But of course the indications thus given are open to numerous exceptions.

424 Breaking up and Ploughing.—In breaking up new land the first thing is to cut down the bushes and grub up the stumps (*jhúnditor*). A thorny bush weighted with clods, and called *godal*, is then drawn over the land to collect the grass and weeds (*kabar*).

Ploughing (*báhna*) is then begun. Two oxen are yoked in each plough, and several ploughs often work side by side. A furrow is called *khúd*, a land *halai*. The bullocks always turn from right to left. The first ploughing is called *pár*, the succeeding ones *dosri*, *tísri*, *chausri*, *pesri*, *chesari*, and so on, each ploughing being at right angles to the last. For the more valuable, and especially for the spring crops, the land is often ploughed 12, 14, or even 16 times. The plough only turns up the soil some 3 inches deep, and the furrows are about the same width. As the share is flat, the soil is only scratched up, and not turned over.

A yoke of oxen will plough for 6 hours, then rest 3 hours, and plough 6 hours again. But if possible there should be two yokes, each working half the day. The labour of the ploughman (*hali*) is very severe, and he cannot continue it many days running. A man to feed the bullocks (*nyár wála* or *baldi*) is needed for every two ploughs, and in fact the recognised establishment is four men per plough, two in front, the ploughman and the hedger and ditcher, and two behind to bring food and weed, &c. These two latter may be women. In five days 3 to 5 acres can be ploughed according to the quality of the bullocks. The year's ploughing must not be begun on a Monday or on a Saturday, or on the 1st or 11th of the month, and on the 15th of the month the cattle must rest entirely. Every day when the plough is brought out the ploughman makes obeisance to it. When the season's ploughing is first begun a prayer is offered up, generally to Dharti Máta or Mother Earth, the common form of the agriculturist's prayer being "*Sah Bádsháh se surkhrúh rakhiye, aur is men achchha naj de, to Bádshah ko bhi paisa de, aur sáh ka bhi utar jáwe,*" or "keep our rulers and bankers contented and grant a plentiful yield, so shall we pay our revenue and satisfy our money-lender."

The plough is carried to and from the fields by being hung over the yoke between the bullocks (*sot lena*).

425 Harrowing.—The *sohágga* and *girri* (§ 414) are used for this purpose, the latter if the land is dry, the former if wet. Both are seldom used at the same time. They are used between the ploughings, and also after the last ploughing. The land has to be gone over

Well Irrigation

three or four times each time at right angles to the last direction more if stiff less often if very sandy

Each takes four oxen and two men to work it besides the man for grass and will do 5 to 8 or even 10 acres once over in five days

426 Sowing—Sowing is called *bijna* seed time *bodra* The seed is sown either broadcast (*phant khunddna*) or in the furrows by a man following the plough (*burri muthi*) or by a drill (*orna*) made of a bamboo tube with a leather cup at the top tied on to the plough This last method is adopted if the soil has dried up much so as to ensure the seed reaching the *dl* or moist subsoil After sowing the *sohdgga* is passed twice crossways over the field except when sown with a drill in which case the *sohagga* is not used

When sown with a plough the area sown is limited by the capacity of the plough A man can sow 20 acres broadcast in five days

The limitation as to time and season and the prayers when beginning the sowing are the same as for ploughing

A certain amount of care is taken to get good seed grain With maize and great millets they select the best heads for seeds and they will often go some distance to buy good seed But there is no attempt at real systematic selection and worst of all no attempt at introducing new blood from other places

427 Well Irrigation—Wells are seldom the property of a single person The sharers irrigate in turn for a day or half a day each according to a rota (*bári osra*) fixed by lot each having a number of turns in proportion to his share but not necessarily consecutive If heavy rain interrupts irrigation the rota starts afresh after it if the rain is light it goes on from where it was broken off There are often two wheels or buckets on the same well in which case the land appertaining to each is called its *adda* or *sek*

The people irrigate (*sinjna*) from wells either by bucket or by wheel *For irrigating with the leather bucket five men are needed* two men to catch the bucket (*bairia*) working half a day each as the labour is very severe two drivers (*khambi* or *killia* from *killi* the peg which fastens the *ldo* to the yoke) and one *panjdia* to look after the channels and let the water successively into the irrigation beds There *should* also be *four yoke of oxen two working* at once one coming up while the other goes down the incline and changing at noon The well is worked from dawn till sunset with 3 hours rest in the hot weather Four yoke of oxen will water 3 to 4 acres in five days according to the depth of the well two yoke will water 2½ to 3 acres in the same time

Canal Irrigation

The labour at the Persian wheel is much easier, as expressed by the saying "*Harat ek ankh se chalta*," "one eye is enough for a *harat*," for the driver (*gadera*) who sits on the beam to which the yoke is tied may be blind, and the *panyara* only needs one eye But of course a man for grass is needed It is better to have four yoke of oxen to change every 3 hours, as the rotary motion soon tires the bullocks, but there are very generally only two, of course in the former case the bullocks would do other work also, and in any case very weak cattle are sufficient to work the wheel The well is worked as long as it is light, but seldom at night, except when the spring crops are ripening under a hot wind A well will water 3 acres of fair soil in five days, but sandy soil absorbs so much water that only 2 to 1½ acres, or even less in very sandy soil (*thali*) will be watered in that time The soil on the unbricked wells is generally of this description

428. When there has not been sufficient rain, it is necessary to irrigate the land for ploughing, or sowing, or both All such irrigation given before the crop is above ground is called *palo* The first watering to the young crop is called *kor*, the second *dosra*, the third *tisra*, and so on When the ground has dried slightly after the *palo* or rain, so as to be neither too wet nor too dry for ploughing or sowing, its state is called *batao*

The water is conducted from the well in small channels called *khái* or *khand* to the fields The field, except for *palo*, has been divided off into beds or *kyaris* by the use of the *jandra* (§ 414), and the water is let into each successively This economises water in two ways *first*, by confining the area to be covered at once with water, and so reducing the average depth of water when the ground is on a slope, and *secondly*, by giving the water less irrigated ground to travel over in order to reach the furthest point of the bed, and so reducing absorption in excess of what is needed

429. Canal Irrigation—The water passes from the canal by a head (*mohand*) into the main distributaries (*rajbaha*) From them it is distributed by small channels (*khánd*, *khal*) to the fields Each main channel supplies many villages, and each village has its turn of so many days The period while the water is shut off is called *tatil*, and if hot wind blows during this time, or if, when the turn comes round, the water fails, as is often the case, great loss is the result

Irrigation from the canal is practised in two ways If the water is delivered above the fields, the irrigation is called *tor*, or flow, if below them, *dál* or lift In flow irrigation all that is needed is to cut a hole (*naka*) in the channel and let the water on to the field Hitherto it has not been the practice to divide the fields into beds, and the result has been that the land has been flooded with an inordinate quantity

Protection of Crops

of water But under the new rules double rates will be charged for fields without beds except for rice fields in which a considerable depth of water is absolutely necessary The area that can be irrigated in this manner in five days is only limited by the supply of water one good opening will water 30 to 50 acres.

Irrigation by lift is practised thus The water is brought up by a low level channel which is met by a high level channel into which the water has to be lifted The end of the lower channel is enlarged and a small pool (*chui*) dug out on either side of the standing places (*fenta*) are dug in the banks. The end of the higher channel is also enlarged into a basin (*nisani*) which is cushioned with grass to prevent the falling water from scouring Two men called *dhis* then stand one in each *fenta* and swing between them the *dal* or scoop This is in the shape of a small canoe and is made of thin veneers of *dhak* wood; even together with leather costs 8 annas and lasts a year It is swung by four strings two at each end on either side of the point The *dhis* take a string in each hand and swing the scoop dip it into the water swing it out full of water up and over the *nisani* and tip the water out by tightening the upper strings. The operation is performed with wonderful skill but the labour is very severe and a man can only work for an hour consecutively at it and cannot work two days running The outside height of the *mathl* or bank over which the water has to be lifted is 4½ feet if the total lift is greater two lifts are used one above the other

It takes four *dhis* and one *pan bharai* to work a *dal* and they will water 3 to 5 acres in five days according to the height of the lift Irrigation by *dal* is sometimes practised from the village tanks and swamps but as a rule only for small plots of valuable crops

430 Weeding—Weeding is called *nulai* It is chiefly confined to the more valuable crops. It is performed by men women and children the petticoats or wraps being gathered into a bag (*jholi*) in which the weeds are collected The weeds are valuable as green food for cattle. As they must be got under while the crop is young, hired labour often has to be resorted to One person will weed a sixth of an acre in five days and in the rains where the soil is heavy and the weeds long not nearly so much Fields should be weeded once twice thrice or five times It is unlucky to weed them four times

431 Protection of Crops—Of course any division between individual fields save the *dol* or boundary ridge is unknown But the masses of cultivation are always surrounded by dead hedges of thorny bushes (*dhinkar*) very often very formidable obstacles indeed to keep out the cattle and wild animals They are also often surrounded by a bank (*kanni* or *kot*) and ditch (*khai*) and in the Khadir where bushes

Reaping.

are scarce, this is their chief protection, the bank sometimes having a euphorbia hedge planted on it Access is given by a stile or *dera*, a Y-shaped piece of wood firmly fixed in a gap Young sugarcane is generally surrounded by a low wall round the individual field till it has grown old enough to take care of itself But nothing avails to keep out the deer and pigs which do terrible damage to the crops, or the monkeys which are worst of all

The crops are also watched night and day by men called *rukhwála*, literally "the man in the tree" In the fields of the great millets these men sit on platforms (*jaunda*, *daunja*) raised well above the crops, from one to another of which stretch strings (*patan*) which the watchers ever and anon jerk so as to swing the great plants about and frighten the birds They are also provided with slings (*gopia*) with which they sling mud pellets (*gola*), while the crack of the sling greatly enhances the effect The lower crops are watched from the ground, the men wandering about armed with long thongs (*tatula*) which they crack like a stock-whip Scare crows (*darawa*) of sorts are set up in every field And the village which is fortunate enough to obtain a license to carry a gun in the name of one of its menials, sleeps happy and dreams of fat crops

432 **Reaping.**—Reaping is called *lámni*, hired reapers *lá-wa*, and their wages *lai* The great millets are cut and collected into bundles (*púli*) which are stood up on end in a stack (*sawa*) to dry The smaller grains are collected and tied up into sheaves (*bhar*) if carried to the thrashing floor on the head, and into small bundles (*púli*) if carried in a cart They are then taken to the thrashing floor and piled up in a *kundra* or stack The straw with the ear and grain is called *lan* One man can reap about an acre in five days

Reaping for the season must be begun on a Monday and must be finished on Wednesday, the last bit of crop being left standing till then Hence the saying *Mangal láwa, Budh badhawa*, "Tuesday for the reaper and Wednesday for the finishing" A prayer is offered up on first starting reaping And a little is always left under the name of *marlla* for the poor as gleanings (*silla*)

433 **Thrashing.**—To thrash is called *gáhna* The *pair* or thrashing floor is swept and plastered by the *Chamars*, and a pole (*med*) set up in the middle The straw with the ears is then spread out round the pole, and four to ten or twelve bullocks, according to the quantity of grain, are tied up in a row and one end fastened to the pole Their collective name is *daun* The bullocks then go round and round the pole treading out the grain, the straw being turned over three or four times so as to expose all parts to their feet The straw is then taken away, and the ears and grain remaining,

which i called *tar* or *dhar* is roughly winnowed and again thrashed in precisely the same manner The resulting grain is again winnowed and the broken ears called *bundar* thrashed a third time

With the great millets they cut the heads (*tusri*) off and thrash them only With maize the cobs (*kukri bhuta*) are stripped of their sheaths dried in the sun and beaten out (*chhetna*) So too small quantities of grains are thrashed out with sticks instead of by cattle The flail consists of a crooked stick and is called *gesla* or *hutka*

Five oxen will thrash 50 maunds of fine rice 25 maunds of coarse rice gram or *jawar* 12 maunds of *bajrá* and 8 maunds of wheat or barley in the day

434 Winnowing —To winnow is called *udaona* or *barsana* The operation is wholly dependent upon the wind the mixed grain and chaff being taken up in a *chhaj* (§ 414 *supi*) and shaken slowly out from a height of several feet The heavy grain falls perpendicularly while the wind blows the chaff to one side The chaff (*tus*) is useles except to burn With a good wind four men will winnow 25 maunds in a day

435 Measuring —The clean grain is collected into a heap called *rás* or *thapa* or *bohal* Preparatory to measuring the greatest care has to be observed in the preparation of this heap or evil spirits will diminish the yield One man sits facing the north and places two round balls of cowdung on the ground Between them he sticks in a plough coulter (*phálí*) This symbol is called *Shdod* the goddess(*sic*) of fertility A piece of the *ak* tree and some *dubh* grass are added and they salute it saying *Shaod máta suphal phaliye Sah Badshah sukhiuh kariye* Oh mother Sháod give the increase and make our bankers and rulers contented The man then carefully hides the *Shaod* from all observers while he covers it up with grain which the others throw over his head from behind When it is well covered they pile the grain on it but three times during the process the ceremony of *chdng* is performed The man stands to the south of the heap and goes round it towards the west the first and third times and the reverse way the second time As he goes round he has the hand furthest from the heap full of grain and in the other hand a *chhaj* with which he taps the heap When the heap is finished they sprinkle it with Ganges water salute it and put a cloth over it till it is time to measure the grain A line is then drawn on the ground all round the heap inside which none but the measurer must go All these operations must be performed in profound silence

436 Then follows the measuring This must not be done on the day of the new or the full moon (*parua*) and Saturday is a bad day for it And it must be begun at dawn or midday or sunset (*sic*) or

midnight, when the spirits are otherwise engaged Four men go inside the enclosing line with an earthen measure (*map*), and nobody must come near them till they have finished They sit facing the north, and spread a cloth on the ground One fills the *map* from the heap with a *chhaj* (*munna*), another empties it on to the cloth (*mandhauna* or *rasana*), and the other two carry off the full cloth and empty it out (*dhona*), substituting an empty one for it If the grain is to be divided into shares, for instance two to one, two measures are put together in one spot, and the third separately, and so on, the separate heaps being called *dheri*, a word really signifying a heap, but used commonly for a share The man who has the *map* puts down for each measure filled a small heap of corn (*bohali*) by which the account is kept Perfect silence must be preserved till the whole operation is over, and especially all counting aloud the number of measures must be avoided But when once the grain is measured it is safe from the evil eye, and the people are at liberty to quarrel over it The offerings to the Brahman and Saiyad (*seori*), usually 25 seers for the former and 5 for the latter for Hindus, and 25 each for Musalmans, are made over to their recipients, a Musalman *faqir* taking the Saiyad's share The dues of the *Chamars* are paid, and the sharers divide the remainder The weight is got by weighing one *map* full, there being no recognised capacity for the measure, as in the Punjab[1]

437 The Work of the Year—In the canal tract five ploughs with ten good bullocks and 20 men will cultivate 60 acres of land, which will be distributed somewhat as follows —Cane, 5 or 6 acres, cotton, 5, rice and jawar, 30 between them, the low swampy land bearing rice, wheat, 20 The small pulses will be sown among the jawar, while gram or mixed grains will follow the rice, and *methi* will be sown among the cotton in the same year On the canal a plough will cultivate a much larger area than in the Khadir, because the oxen are not wanted for irrigation, but the number of men must correspond with the area, and not with the number of ploughs

438 In the Khadir a Persian wheel will, in highly cultivated villages, have some 16 acres attached, of which 12 will be irrigated yearly There will be two ploughs on it, with 4 oxen, and 4 or 5 men where the women work, and 6 or 7 where they do not, and these same ploughs will perhaps cultivate some 4 acres of unirrigated land in addition On five such wheels the 80 acres of land will be distributed somewhat as follows —Cotton, 8 acres, sugarcane, 6, maize, 6, jawar, 20, gawar, 4, mot, 4, wheat, 28, gram, 4 Methi will be sown among the cotton, and the maize will be followed by barley or wheat in the same year Among bad cultivators the area per plough will be greater, but it will probably include a good deal of unirrigated land, and the total yield per plough will be smaller

436 [1] N W P i, 194ff, 236ff

Cost of Cultivation

439 In the Nardak where the Rajput runs his plough over the ground flings in the seed and trusts to God for the produce the area which can be cultivated by a plough is capable of extraordinary exten sion in a favourable season Five ploughs with their 10 oxen and 12 men (for here weeding is not practised and few men are required) will cultivate some 100 acres almost all unirrigated as follows —Coarse rice 30 acres jawár 25 cotton 5 sesame 7 maize 5 gram and barley 10 gram 20 and a little rape But if the early rains are heavy *coarse rice will be sown in every available acre of land fit for it up to 50 to 70 acres for the preparation of the ground involves little la* bour and the seed time has wide limits And a great part of that will be followed by gram in the spring So again if the late rains are heavy and last long the Rajput goes out rejoicing and ploughs the whole country up for gram On the other hand if the rains fail hardly a sod will be turned or a seed sown in the high Nardak

440 Cost of Cultivation —*It* is impossible to estimate the cost of cultivating any particular staple by itself or at least the estimate when made is meaningless Take tobacco for instance The necessary labour of both men and oxen would at market rates amount to a good deal more than the crop is worth But the men and oxen are both there and their labour is for the most part given at a time when it could not be used profitably in any other way the to bacco season being the slack time of the year The only estimate that is worth making is that of the whole cost of cultivating the land under one plough *Taking two oxen costing Rs 35 each eating one* anna a day and working 10 years three men with their families at Rs 3 a month each (I take three so as to include the labour of the vil lage menials) half the interest on the Rs 200 the cost of a well and allowing for wear and tear of implements we have for yearly ex *penses*—

	Rs
K ep f b llo ks	45
Dete t on	7
Keep f lt t r	1 8
Inte t n c st f w ll t 20 per c nt	20
W d t r of g	5
	185

or Rs 185 for say 10 acres or Rs 18 8 per acre But the actual expenses will be less the cattle will be home bred the fodder food and clothes will be home produce and much of the cost of the well will have been extra labour not paid for and which bears no interest

Cost of Cultivation.

In the canal tract there will be four men in place of three, and instead of interest on the cost of a well, there will be about Rs 2 an acre all round for canal water rates This will bring the cost of cultivating 12 acres to Rs 225 or Rs 18-12 an acre, practically the same as in the Khadir But such estimates are, I believe, very unprofitable, and give us little information about the *real* cost of production as it comes out of the cultivator's pocket There are some further remarks on the subject at § 132 of my Printed Assessment Report on Tahsil Panipat

CHAPTER XII —AGRICULTURAL STAPLES

441 Statistical —Statement X shows the area under each crop at survey and statements XI and XII give further details Statements XIII and XIV show the estimated yield of the principal staples The table over leaf shows various particulars concerning the cultivation of each of the chief staples The figures refer to well cultivated crops but of course there is always a good deal of land in which the cultivation falls far short of the standard Most labour is naturally bestowed on the irrigated and manured land the other getting the leavings of the cultivators time

The calendar given with § 4-2 shows the seed time and harvest for each staple I give below a short account of each of the principal staples I make no mention of vegetables drugs spices pepper and the like as their cultivation is wholly confined to the market gardens round the town and to a corner of a field here and there which satisfies the private needs of the villagers The cultivation of opium has been forbidden in the Delhi territory since 18-5 indigo used to be grown largely by the Skinners but its cultivation has been discontinued It is not cultivated as a rule in the villages though there are a few vats near the town and it is occasionally grown for seed

Statistical

Native names	English name or description	Botanical names, and references	No of ploughings	Maunds of manure per acre	No of waterings after sowing	No of weedings	Seers of seed per acre
Ikh	Sugarcane	Saccharum officinarum A C 59, S 260, B P 1052ff	10 to 15, or more	600	4 to 5		
Bari	Cotton	Gossypium herbaceum A C 25, S 22, B P 1731	2	400	0 to 1	3	7½
Makki	Maize	Zea mays A C 34, S 263, B P 799ff	5 to 6	180	1 to 2	2 to 3	7½
Dhán (*zíri*)	Fine rice	Oryza sativa A C 31, S 257, B P 808ff	2	?	?	1 or more	?
Dhan (*sánthi* or *múnji*)	Coarse rice	Oryza glutinosa (as above)	2 to 3	0	0	1	22½
Jawar for grain *Jawar* for fodder	Great millet	Holcus sorghum A C 20, S 262, B P 830	2 to 3 2	0 0	0 0	1 to 2 0	7½ 15 to 30
Bajra	Spiked millet	Holcus spicatus A C 23, S 259, B P 837	2	0	0	1	1¼ to 2
Mandwa	A small cereal	Eleusyne coracana A C 36, S 254, B P 839	2	?	1	1	?
Moth	A small pulse	Phaseolus aconitifolius A C 38, S 73, B P 847	2	0	0	0	5
Urad	,, ,,	Phaseolus radiatus A C 38, S 73, B P 846	2	0	0	0	5
Múng	,, ,,	Phaseolus mungo A C 38, S 73, B P 844	2	0	0	0	5

Statistical

Ga dnr	A pulse	Dolichos p oralo des B P 849	2	0	0	0	5
T l	Ses me	Ses mum entale A C 56 S 149 B P 1 6 3		0	0	0	5
S	A fibre	H b cus c ab nus A C 43 S 22 B P 1 758					
Sa ı		Cr t l juncea A C 44 S 64 B P 1 753	1	0	0	0	20
G h n	Wheat	T t c m œstivum A C 45 S 262 B P 762ff	10 to 12	400	4 to 5	2	37 /
Jao	Barley	H de m he astichum A C 48 S 256 B P 779ff	to 4	?	?	0	30
Ch a	G am or ch ck pea	C er a t m A C 50 S 63 B P 850	1 to 4	0	0	0	12½ to 20
Mas l or Masn	Lentils	Ervum lens A C 38 S 68 B P 851	2	0	0 to 4	0	1 /
Sa sam	Rape	Brass ca campestris A C 55 S 11 B P 1 618	2	0	0	0	12½
Methı	Fenug eek	T g ella fe u œcum A C 65 S 77 B P 881	2	?	4 to 6	0	1 /2 to 20
T n bdk l	Tobacco	N c t na t bac m A C 72 S 158 B P 110ff	8 to 10	300 to 600	7 to 10	7 to 10	?
Kara	Safflower	Ca th m s t n to s A C 50 S 124 B P p 464f					

Diseases and Enemies of Plants.

442. Diseases and Enemies of Plants—Many of the evils to which plants are subject are peculiar to particular staples, and are noticed in their places below But a few are very common Much information on the subject has been collected by Mr Baden-Powell[1]

Pála or frost is very injurious if severe and not accompanied by rain, or if a west wind blows at the time There is a saying *gaṛta mín pachheta, pála, yih kirsan ká gala* "tardy rain and frost are the husbandman's loss" It especially attacks cotton, sugarcane, gram, rape, and early wheat while in the ear

Kág, kágwa or smut is produced by east winds with cloudy damp weather It attacks wheat especially, and also jawár and sometimes barley But it is, as a rule, sporadic in the two latter

Al or *ála* is a black oily appearance upon the leaves of cotton and sugarcane But it is also used for a gregarious caterpillar, which especially attacks cotton, rape, and sesame

Kungi or rust is produced by the same influences which produce smut It attacks wheat chiefly, and is exceedingly destructive

Jackals do most harm to maize, of which they "do not leave even the bones," and to sugarcane They also eat *methi* and safflower

Pigs are catholic in their taste, but if they have a preference, it is for rice, jawár, maize, and cane

White ants eat most things, especially gram, cotton, and cane They cannot move in *dákar*, as it is too stiff and moist for them, and plenty of water will always keep them away

Ujála or general withering up from any reason, and *sokhá*, or withering from want of water, are of course evils common to all plants

443. Sugarcane.—The principal varieties sown are *Surta* or *Sotha*, with a long, soft, thick, white cane, the best of all, but somewhat delicate, and especially fancied by jackals *Láhri* with a hard, thin, red cane, very hardy, and will not spoil even if the cutting be long delayed, but not very productive of juice *Merati* or *Merthi* with a thick, short, soft cane, and broad leaves it is very productive, but requires high cultivation, and suffers from excess of rain, it is not much grown *Ponḍá*, a thick sweet variety, grown near the cities for eating only, as its juice is inferior

Cane grows best in fairly stiff loam, and worst in sandy soil It likes abundant rain, and will stand a good deal of swamping, though too much makes the juice thin It is occasionally grown in flooded land without irrigation, but the yield is precarious

442 [1] B P 224ff

Sugarcane

Its cultivation is far more laborious than that of any other staple The land must be ploughed at least ten times and worked up to the finest possible condition The more manure given the better the yield and it is never sown without If the soil is impregnated with *reh* the juice becomes watery and yields but little sugar

444 The amount of seed is fixed in the following curious manner —As many canes as will make up a total length of 21 hands is called a *panja* or handful Twenty one *panjas* are a *puli* or bundle and 30 bundles are sown in one acre The word *panji* though common I believe in the Punjab is not used or known in the tract in any other connection than this The seed cane will be worth Rs 5 to Rs 6 per acre The seed cane is buried in the ground till wanted next year Generally whole canes are buried but a custom is growing in the Khadir of using only the top 18 inches or so of the cane for this purpose as this is the piece which makes the best seed and gives the least juice The seed cane is cut up into *pari* or slips with two knots in each and they are laid down a foot apart in the furrow by a man following the plough who presses each in with his foot The plough has a bundle of canes tied under the share to make a broad furrow Nine men will sow an acre in a day The *sohagga* is then passed over the field On the first day of sowing sweetened rice is brought to the field the women smear the outside of the vessel with it and it is then distributed to the labourers Next morning a woman puts on a neck lace and walks round the field winding thread on to a spindle[1] This custom is now falling into disuse

Three days afterwards they hoe the field all over with *khodalis* and follow with the *sohagga* This operation is repeated four times at intervals of 10 days Ten men will work an acre in a day The field is then watered

445 The *panchha* is then given They spread more manure hoe it in beat the ground with sticks to consolidate it water hoe and beat again and so on two or three times it taking twenty men to do an acre once over in a day A month after this they water again and go on hoeing and watering till the rains set in During the rains it must be weeded once *at least* after the rains it is watered once or oftener according to the season and if it shows any tendency to droop tied up into bundles (*jura*) as it grows As soon after Diwali as the cane is ripe it is cut If it is allowed to stand too long the flower (*nesari*) sometimes forms and it is then useless Cane is occasionally grown a second year from the old roots and is then called *munda* The cane is cut down and dressed (*cholna*) on the spot by stripping off the leaves and cutting off the crown (*gaula*) These are given to the cattle to eat. This work and the crushing are done by the associa

[1] 444 N W P 271

tion or *lána* described in §§ 279 and 280 *supra*, there being one pair of bullocks for every acre of cane

446. When the cane is brought to the press it is cut up into *ganderi*, or pieces 6 to 8 inches long The press is started on Sunday, and an altar called *makál* is built by it, where five *ganderis* and a little of the first juice (*ras*) expressed and 1¼ seers of the first *gur* made are offered up, and then given to Brahmans on the spot The press is tended by two *peria*, who feed the press with cane, opening out the canes in the press with an iron spike or *kail*, and driving new canes well in by beating them on the top with a leather glove faced with iron (*hatarki*), two *múthias* who drive the bullocks and hand the cane from a basket fastened on the beam to the *peria*, two *kárígars*, who look after the boiling and make the gur, and two *jhokas* or firemen who feed the furnace For each twenty-four hours the *perias* get 9 seers of *gur*, and their food and tobacco, the *múthias* get 2 seers and food, the *kárígars* 8 seers, and the firemen the same The *kárígars* are generally *Jhínwars*, and get 2½ seers on the first day in the name of Báwa Kálu, their *guru* or spiritual chief A certain amount of juice and cane is also given to the workmen The blacksmith gets ¾ of a seer, the carpenter 2 seers, and the potter ½ seer of *gur* per diem The hire of the iron pans is from Rs 9 to Rs 12 each for a season

447 As the juice runs out it is received in an earthen vessel (*báha*, *kundi*) sunk in the ground, and holding some 60 to 70 seers A press will crush an acre of average cane in five days, working night and day The juice is dipped out of the *kundi* into a large pan called a *kúnd* When the *kúnd* is full the juice is transferred to a *karaha* or *karáhi* or *bel*, an iron evaporating pan let into the top of a furnace, and is there boiled After being similarly treated in a second evaporating pan, the inspissated juice is put to cool into a broad shallow earthen pan (*chák*) and worked about with a flat piece of wood (*háti*, *hátwa*) When cool it is called *gur*, and is ladled out with a wooden spoon (*dolera*) and scraper (*musad*), and made up into balls (*bheli*) weighing 4 seers each, of the shape of a cottage loaf The first ball is given to the Brahman at the *makál*, the others are taken to the Banya and credited to the account The crushed cane (*khoi*) is used to feed the fire with The cane saved for next year's seed is buried in the corner of the field

448 Young sugarcane is attacked, when about a foot high, by a worm called *kansua*, especially if the east wind blows A smut called *al* also attacks it under the same circumstances Mice do much harm, and also white ants and frost

449. Cotton—No varieties of cotton are recognized by the people It grows best in stiff loam, worst in sandy soil It is better, if possible, to grow it by the aid of rain alone, and without irrigation,

Cotton

after sowing at any rate till the rains are over The more manure the better but it often follows sugar when no fresh manure is given and in the Nardak it is grown without manure On the canal it is sown a full month earlier than elsewhere as the ample supply of water enables them to make the land moist enough before sowing to carry it through the rains

The ground is ploughed twice and the *sohagga* used the seeds are rubbed in cow dung to prevent their sticking together and sown broad cast When the two seed leaves appear it is weeded and twice again after that the saying being—

Naulai nahin dopatti
Kya chugaoge kupatti

If you dont weed when there are two leaves you will pick no thing

When it begins to flower it especially wants water which must be given if necessary for if it dries and especially if the east wind blows at the same time the flowers fall off and the pods dont form It generally gets watered again with the other crops which are sown among the plants

450 When the pods (*tind*) open and the cotton is ready to pick (*chugna*) the women go round the field eating rice milk the first mouthful of which they spit on the field towards the west This is called *phuiakna* The first cotton picked is exchanged for its weight of salt which is prayed over and kept in the house till the picking is over The picking is done gradually as the pods open It is performed by the women of the house when they are not secluded otherwise by the poor women of the village who take ⅟ of the pickings in the earlier pickings when there is plenty of cotton and more up to – as less and less remains to pick The last gleanings are left for the poor

451 The cotton as picked is called *kapas* and is passed through a small hand mill (*charkhi*) consisting of a wooden roller revolving in contact with a very small iron roller the latter nipping the cotton and drawing it through and so tearing it off the seeds (*binola*) which are left on the other side The *kapás* consists of about a third cotton and two thirds seeds The cotton thus ginned (*rui*) is scutched (*pinjna dhunakna*) by the *pumba* or *teli* with a large double stringed bow (*pinan dhunka*) hung from a flexible bamboo the strings of which he twangs violently with a heavy plectrum of wood (*tid*) and the vibrations toss up the filaments and form them into a fleece leaving the dirt at the bottom For this he takes the weight of the cotton in grain The women spin the cotton and give it to the weaver to weave paying him one rupee for weaving about 60 yards

452. After the cotton is picked, the cattle are turned into the field to eat the leaves, and the dried stems (*bansati, banchatti*) are cut down and used as withies for various purposes, or for fuel The seeds are a valuable food for cattle, as they are very full of oil Cotton is especially liable to the *al* smut, and to attacks of caterpillars, and of a red worm in the pod

453. Maize.—Two sorts of maize are grown, the *pili* or early yellow maize, and *dhauli* or late red maize The former has the better grain, and the latter is the more productive

Maize must have plenty of water, and must have at any rate a little *fresh* manure, even if sown after sugarcane It grows best in light soils and well in sandy ones It will not grow in very stiff soil

The ground is carefully dressed and the seed sown broadcast It is weeded on the 10th, 22nd, and 35th day after sowing, or thereabouts It cannot go a month, and should not go more than three weeks without water, and it is only in *very* good years that it need not be irrigated If it once dries up, no after-watering will save it. A little early maize is often grown as fodder for the cattle, it produces hardly any grain

The maize is cut down and the cobs (*kokri*) picked off, stripped, dried in the sun, and beaten with sticks to separate the grain The unripe cobs (*bhúta*) are often roasted and eaten

The stalks (*karbi*) are good fodder, though not so good as *jawár*

Maize suffers from a worm in the knots of the stalk, and especially from pigs and jackals

454. Fine Rice.—Rices are divided into two well-defined classes, the fine rices, varieties of *oryza sativa*, the grains of which cook separate, and which are known to the people under the generic name of *zíri*, and the coarse rices, varieties of *oryza glutinosa*, the grains of which agglutinate when boiled, and of which the principal sorts are *múnji* and *santhi* This and the following paragraphs refer to the fine rices only

The *ziri* proper is a small rice with a short straw, the principal varieties are *Ramáli* and *Ranjamani*, the latter of which has a particularly hard fine grain *Sunkar* and *Ansari* are coarser rices, chiefly grown where there is fear of too much water, in which case their long straw gives them an advantage

455. Rice grows only in stiff soil It is usually grown in low lying *dákar* so as to take advantage of the drainage water, but

Fine Rice

if the water supply is sufficient the best rice is grown on fine stiff soil on a slope where the water is perfectly under control

The seed beds are ploughed four or five times and carefully pre pared manure is spread on them and the seed sown broadcast and very thickly on the top of the manure More manure is then spread over the seeds and the whole is watered Four days after they are again watered and after the fifth or sixth day they must be kept wet till they are ready to plant out

The rice field is ploughed twice and such manure given as can be spared It is then flushed with some three inches of water and a *sohágga* toothed if there are weeds is driven about under water (*gir* or *gin dena*) If the weeds are obstinate the plough must be used again under water When the *sohagga* has worked up the mud into a fine pulp *Jhinwars* and *Chamars* take the seedlings (*peod*) in handfuls (*juti*) and plant them one by one in the water pressing in the roots with their thumbs An acre will take 500 to 600 *jutis* which will cost if bought Re 1 4 It will take ten men to plant it in a day and they get 2½ to 3 seers of grain each daily

456 The field is weeded once at least. At first the whole field must be kept under water continuously for each seedling throws out five to ten new shoots which cannot make their way unless the ground is pulpy and it is on the abundance of these shoots that the crop depends The water must not be more than 6 inches deep or the shoots will be drowned before they get to the air and it must not be changed as it would carry away all the strength of the manure and the soil When the ears once begin to form the ground must be kept well wetted but not too slushy or the plants will fall If the crop is wholly under water for more than four days it dies

The reaping must be done directly the grain is ripe or it will fall out of the ears into the water Thus hired labour is a necessity and *the payment is 5 or 6 seers of unhusked rice* If the water is deep and the plants as cut have to be put on bedsteads to keep them out of the water the reaping is slow otherwise the same as other small cereals

456a The rice is thrashed in the ordinary manner but the grain has to be husked in the *okal* (§ 414) Standing rice is called *dhán* as is the unhusked grain in contradistinction to husked *chawal* The husking is generally done by the women of the house If done by a labourer he returns 18 seers of *chawal* from every 30 seers of *dhán* keeping about 2 seers of good rice and as much of broken bits which he will grind up and eat as bread The rest is husk which is useless The straw (*purāli*) is very poor fodder and is used largely for

bedding for cattle, and for mixing with manure, or is even ploughed in fresh But it is also given to cattle to eat

457 Rice suffers much from *khúd* or *kokh*, apparently acquatic larvæ or other animals that eat the young sprouts Water bird, too, play terrible havoc with it when it is ripening If the whole plant dries up it is called *malam*, if the grain only, *patas* is what is the matter with it

458 Coarse Rice—Coarse rice (see § 454 *supra*) is of two kinds, *múnji* and *sánthi* The peculiarity of the former is that it cannot be drowned out, the straw lengthening as the water deepens It is therefore sown in spots liable to flooding It will stand two feet deep of water, and if the ripe plant falls into the water, the grains do not fall out as they do with *zíri*

The peculiarity of *sánthi* is that it ripens within an extraordinarily short time (nominally 60 days, hence its name) from the sowing, it is sown all over the Nardak, and generally wherever there is no irrigation, as the rains will usually last long enough to ripen it Huen Tsang noticed its quick growth with admiration when he visited the Nardak 1,500 years ago[1] *Sánthi* has a short straw and does with but little water, it being sufficient if the soil is thoroughly moist after the shoots are once up The young shoots are liable to be eaten, and if the water gets very hot they will sometimes rot, but the plant is wonderfully hardy, and when the stalks have once grown up hardly anything hurts it

459 Both kinds are sown at once where they are to grow After two or three ploughings cattle are sent in to the water to walk about and stir up the mud, or the *gan* or toothed *sohagga* is used under water The seed is sown broadcast on the *gadal* or fine mud No manure is used, nor is the crop irrigated The *parali* or straw is better fodder than that of *zíri*, but still not good The coarse rice forms a staple food of the people, the fine rices being sold and seldom eaten by them

460 Jawar.—There are two varieties of *jawár*, the *pílí* or *ahípúri*, which gives a sweet large grain, but is delicate, and the *daul*, which is very hardy *Jawar* grows best in medium loam, and is not grown at all in very sandy soil It is very seldom either manured or irrigated

The land is ploughed two or three times, and if very dry, a *sohágga* is passed over it The seed is thus sown broadcast,—if grain is wanted, very sparsely, the plants growing large and strong, and yielding fine heads of grain, if fodder is the object, very thickly, the

458 [1] S J i, 206

plants growing close together with thin straight stalks giving little grain but an immense deal of fine sweet fodder

If sown for grain it is weeded once at least—twice if possible and small pulses are often sown with it When the crop is cut the heads (*tasri*) are picked off and the stalks (*chari*) stacked for fodder The finest heads are selected for seed and thrashed with sticks and the others thrashed in the ordinary way The seed heads are covered with a down which irritates the legs of the labourers If the fodder crop in any field is very inferior from late sowing or scanty rain it is cut green and is then called *chhí*

Jawár suffers from worms in the *gíba* or bud and a worm also eats the stalk which then turns red and hollow inside and no grain forms But the plant is exceedingly hardy and if there is plenty of rain hardly anything hurts it. It is said to exhaust the soil more than most other crops

Most of the bread eaten by the people during the cold weather is made of *jawár* flour

461 **Bajra**.—There are no varieties of *bájra* recognised in the tract. In fact it is not very largely sown It thrives best in sandy soil and will not grow in stiff soil It is sown the moment the first rain falls as the sandy soil retains the moisture for a long time The mode of cultivation is just the same as for *jawár* but it is always sown exceedingly sparsely and some small pulse is generally sown with it and grows between the plants The stalks are called *dandás* and are of no use for fodder If rain falls on the flower (*bur*) it washes the pollen off but hardly anything else affects it. The flour makes good bread but is said to be heating

462 **Mandwa**.—No varieties are recognized It is grown in fairly stiff soil but chiefly in the Khadir and there only in small quantities It is sown in seed beds carefully dressed and manured The seedlings are then planted out in land which has been twice ploughed and dressed with the *sohagga* It is watered once or twice if the rains are late and weeded once The heads ripen slowly and the ripe heads are picked off and the grain beaten out The *bhus* is very bad fodder and is generally burnt as it stands or grazed down The flour is used for bread but is very indigestible but it has the advantage that it may be eaten on fast days as it is plucked not reaped like other cultivated cereals It is the *rági* of southern India

463 **Moth**.—No varieties are recognized It is sown in light or sandy soil as soon as the first rains fall It will not grow in stiff soil and in the Nardak where there is no sandy soil is grown chiefly for fodder the yield of grain being insignificant The ground is ploughed twice over and the seed sown broadcast and neither weeded

manured, nor irrigated It is often sown with *jawár* or *bajra* The *bhús* of this and of *urad* and *mung* is the best of all fodder The seeds of all of them, when husked and split, are called *dal*, and eaten largely by the people, generally boiled

If the east winds blow when it is flowering, it yields but little grain , otherwise it is a very hardy plant

464 Urad—The remarks on *moth* apply exactly , except that it will grow in stiff soil also, and is generally sown alone The *dal* is of the finest description

465 Mung—The remarks on *moth* apply exactly , except that it is almost *always* sown and reaped with *jawár* or *bajra* The *bhús* is not nearly so good as that of *moth* or *urad*, but is still very good indeed

466. Gawanr.—This pulse is cultivated in much the same manner as those above mentioned It is grown for cattle only, the seeds producing flatulence, and having to be given cautiously even to cattle The *bhús* is worthless , but the green plant is cut and chopped up and given to bullocks It grows only in light soil , and is sown with the first rains, and always alone

467. Til—No varieties of *til* are recognized It must be grown in good stiff soil , and the soil *must* be new to give a good crop, which is probably the reason why it is chiefly cultivated in the Nardak where virgin soil abounds It is generally sown with *jawár* or *urad* , and the mode of cultivation is the same as that of the latter When the plants are cut they are put up on end to dry As they dry the pods open, and the seed is then shaken out The stems (*dansra*) are no use The seed is taken to the oilman, who returns two-fifths of the weight in oil, keeping the oil cake (*khal*) which he sells The oil is good for burning, and is the best of all oils for purposes of the kitchen

Til is very subject to attacks by caterpillars (*al*) And if it once dries up it never recovers it It is, however, never irrigated

468. San.—San* is sown, seed by seed, on the edges of the sugarcane field, or in rows among the cotton, and takes its chance with them It is cut in Kátik The plants dry for two or three days, and are then, or when wanted, weighted down under water in the pond They soak for 40 to 60 days in the cold, or 20 days in the hot weather The fibre is then stripped off, washed thoroughly, dried, and is ready for use

* Mr Baden Powell, in his Punjab products, warns the reader against confusing *san* and *sani* He has, however, exchanged their names *Sani* is the leguminous Crotalaria, and *san* the malvaceous Hibiscus

Wheat

The sticks are called *sankokra* and are useless The fibre is especially used for the *lao* of the well as it is very strong and stands water without rotting It is also used for ropes in general but does not wear so well as *sani*

469 Sani.—*Sani* is sown in the best of soils only The land is ploughed once the seed is sown broadcast and no further trouble is taken with it. It is sown in Sárh and cut in Kátik It is dried and then steeped for 8 to 10 days in the cold or half that time in the hot weather The stems are then washed dried and put away whole the fibre being stripped off as wanted It makes the best ropes of all but will not stand constant wetting The sticks are called *sunki* and are useless

470 Wheat—Wheat forms the chief spring staple of the irrigated portions of the tract. The principal varieties are the *pila* the best of all wheats *kunji* with a long straw and full ear of somewhat inferior grain *jogia* a short red wheat of good quality and *lál* a very hardly and productive wheat of good quality which does with less water than the others and is sown in the inferior soils and in the unirrigated portions of the tract. These are all bearded wheat without awns (*mundli*) being but little cultivated

471 Wheat will grow in almost any soil except the very stiffest where barley takes its place and if there are good Christmas rains (*maha wat*) a fair crop may be got without irrigation The soil is worked up in the most careful manner during the rains and the oftener it is ploughed the better It is generally sown after cane or cotton when no fresh manure is added otherwise manure is almost always given and the *Mális* and *Ráins* use a top dressing of *rehi* (§ 266) of some 12 or 15 maunds to the acre when the plant is six inches to a foot high The field is dressed laboriously with the *sohiggi* and the seed sown broadcast It is watered 20 to 30 days after sowing according to the original wetness of the soil and then at intervals of a month three times more on the canal four times more in the Khadir It is weeded after the first watering and once again in the Khadir at any rate where the *pilás* are numerous

It ripens suddenly and hired labour is generally needed for the harvest the labourers getting 5 to 7 seers a day in the ear The *bhus* is very fine fodder The grain of wheat alone is not much eaten, it going to the Banya while the people eat the mixed grains mentioned below

472 Wheat is very liable to smut often called *dhaunchi* in this case and rust Sometimes the east wind in dull weather will make the ears curl and twist up and this is called *mirorla* Late frost does it much harm if it has been sown so early that the ear is then forming but not otherwise

Gram.

473 Barley—No varieties are recognised It is the hardiest of all the small cereals, will grow in any sort of soil, and will stand either excess or deficiency of water It may be sown later, too, than any other of the spring crops, and I have seen men sowing barley at the very end of the season on the edges of a swamp which were still too wet to plough, with the intention of ploughing it in as the soil dried The limit to the sowing is expressed by the proverb, "*boya Po, diya kho,*" "sow in Po, and you lose your seed"

The field is ploughed two to four times, the *soh*á*gga* is passed over it, and the seed sown broadcast Manure is given if there is any to spare, which there seldom is, and water is given if the needs of the other crops allow of it It is seldom weeded unless the weeds are very bad The grain is much used by the people for bread, and the *bh*ú*s* is admirable fodder, though not so good as that of wheat

Barley sometimes suffers slightly from smut, but nothing else seem to touch it, wind and weather of course excepted

474 Gram—No varieties of gram are recognised It grows best in the stiffest soil, and hardly at all in sandy soils It is generally sown broadcast *before* ploughing In the very stiff rice fields the *d*á*kar* is ploughed up once after the rice is cut, so as to break it up into large hard clods, in the crevices between which the gram grows Lighter land is ploughed two or three times, and is sown more sparsely than stiff soil No manure is used, and irrigation rots the plants, so that the soil should be very moist for sowing If this is the case, and the Christmas rains are good, a fine crop is almost certain Gram is never weeded The grain is used as *dal,* and for bread, often in the latter case mixed with cereals The *bh*ú*s* is admirable fodder The young plant is used as a vegetable, the green seed is eaten raw, and at harvest time the plant is thrown on to a fire of grass, and the roasted seeds (*hole*) rubbed out and eaten Either the phosphoric acid which the leaves deposit, or the down with which they are clad, is exceedingly irritating to the skin The plant is exceedingly sensitive to frost, and a green worm called *sundl* attacks the seed, especially if the Christmas rains are late so that the ground is damp when the seed is forming

475. Masur or Masri—A small pulse, growing chiefly in the very light soils of the Khádir The ground is ploughed twice and dressed, and the seed sown broadcast No manure is used, but it is irrigated if the labour can be spared The grain makes very good *dal,* but the yield of fodder is insignificant

476. Sarson—There are two kinds of *sarson* grown in the tract, the black in the Nardak, which is more hardy but less productive, and the yellow in the less arid parts It is grown chiefly for its oil, though the green plant is much used as a vegetable, and as green

meat for cattle It is generally grown together with wheat or gram often in rows (*ar*) along the field and takes its chance with them If sown separately it is neither weeded nor manured and seldom watered It ripens in Phagan the earliest of all the *rabi* crops except *toria* and the plants are picked out from the crop with which they are growing The seed is called *bakhar* and yields an oil which is the finest of all oils for burning and is also good for cooking purposes though inferior in this respect to that of *til* The oilmen return one third of the weight of seed in oil if yellow and one fourth if black and keep the oil cake The *bhus* is called *turi* and is worthless The plant is subject to the attacks of a gregarious red caterpillar (*al*) and is very sensitive to frost

477 Toria —An insignificant oil seed one of the *brassicas* deriving its value from the rapidity with which it ripens It is sown in Bhadon and ripens in Po coming in just when oil is dear and before the other spring oil seeds have been reaped Hence the proverb

Toria hal jorna urdon chhoti bel
Bhâwen kitna bhâgle pakunga ter gel

The plough is yoked for the *toria* when the *urad* creepers are already long But hasten as you will I will ripen along with you

The land is ploughed up twice after the rains and the seed sown broadcast It is neither weeded irrigated nor manured but it is like the other *brassicas* often plucked as green meat for cattle The oil is good the *bhus* valueless

478 Methi —A trefoil used only as green fodder for cattle or as a pot herb It is generally sown sometimes with a little gram or *sarson* mixed with it between the cotton plants more being sown in stiff than in light soil Before the pods open the ground is grubbed up with a hoe and the *methi* sown It is watered the day after and again at intervals of 20 days or less as it needs a great deal of moisture It grows very thick and close and is cut green It only yields one cutting

479 Tobacco —Tobacco is very generally grown in the villages but mostly for private consumption only except where local peculiarities are especially favourable The *desi* variety is almost exclusively cultivated of which *bugdi surnali* and *khajuri* are forms distinguished by the shape of the leaf

The plant grows best in a nice loamy soil neither too stiff nor too open A *slight* saline impregnation rather improves the plant and the water of bitter wells or of the dirty village ponds is best Canal water is too pure There is a well in the village of Phurlak the tobacco of which is celebrated throughout the district

Karar.

480. The seed is scarcely ever sown by the villagers, who obtain the young seedlings from the market gardeners of the town [illegible] Re 1-4 for enough to plant an acre. The land is ploughed [illegible] times, dressed most carefully, and laid out in ridges [illegible] 2 inches high and eight inches apart, the seedlings being planted half way up the ridge on either side alternately and about 8 inches apart, for if water lies about the stem, it injures the plant. This is done in Magh or Phagan. They are then hand-watered with manure dissolved in water. Solid manure is generally used as a top dressing [illegible] required. The dung of goats and sheep is the best, and old dry cow-dung mixed with ashes. The field is watered every 10 days or so, and the hoe is then freely used, so as to keep the earth about the roots open and the weeds removed. As the leaves grow they are sprinkled with *reh* or ashes to keep off insects and improve the flavour, and the flower-bearing pedicles (*gol*) are nipped off as fast as they appear.

481. The plant is ready to cut in Jet or Sarh. The whole plant is cut in the morning, and left in the field for 24 hours to dry. Next day they are piled up and left to dry further. A hole is then dug and the plants are packed into it, covered up with [illegible] or [illegible], and left to ferment for five to ten days.

The leaves (*pat*) are then stripped, and either tied up into bundles (*júti*) or twisted into a thick rope. They are, if necessary, further fermented, and are finally dried and kept for use. When tobacco is wanted, the leaves are cut up and powdered with an equal weight of *gur* in a mortar.

After the plant has been cut, leaves sprout from the stump and are picked and used by the poorer classes.

482. **Karar**.—*Karar* or safflower is usually sown very sparsely with gram or on the edges of the fields, seldom by itself. Only small quantities are sown. The soil requires little preparation and no further care. When the flowers open the women pick out the petals; three days later they repeat the operation, and again a third time after the same interval. If hired they take a quarter of the picking as their wages. The petals are bruised the same day in a mortar, rolled between the hands, and pressed slightly into a cake. Next day they are rolled again, and then spread in the sun for two days to dry, or still better, one day in the sun and two days in the shade. One seer of petals will give a quarter of a seer of dry dye. Any delay in the preparation injures the dye. The dry dye is called *kasumb*, and is the yellowish red colour with which the clothes of the village women are ordinarily dyed. The dyer (*nilgar*) has the cloth and dye brought to him, retains one-fifth of the dye as a perquisite, and is also paid for his trouble. A bitter oil is expressed from the seeds, which is used for burning only. Forty seers of seed will give 3½ seers of oil.

Mixed Crops

483 Mixed Crops —The mixed crops proper are confined to the spring harvest for the small pulses so commonly grown among the huge millets in the autumn are reaped and thrashed separately In the spring however mixed gram and barley (*jauchani*) wheat and gram (*gochani*) wheat and barley (*goji*) and all three mixed (*berra*) are commonly sown and reaped together especially the two former This custom has brought on the Indian cultivator much very unde served hard language It is true that the mixed grains have no ex port value but then he does not grow them for export or even as a rule for sale In one village the people complained that their *Banj is* to whom they were in debt would not let them grow mixed grains The peasant devotes his best soil his manured and irrigated fields sown at the proper season and when neither too wet nor too dry to the single grains which he will sell to his banker In the re ich he eats himself liking the nitrogenous pulses an indis which religion or poverty for bids to him

Besides this the three crops which are sown together flourish un der different circumstances and a season which destroys one will very likely suit the other and so give a fair yield in the end If it is rather late to sow gram alone he sows gram and wheat and if the soil appears very wet he will sow gram and barley The damp will suit the barley while if there are no Christmas rains it will save the gram The frost which will kill the gram will spare the others while the dew on the gram leaves will help the wheat and the wheat and barley will shelter the young gram from the sun

484 Rotation of Crops —Such rules as are observed by the people regarding the rotation of crops are of course founded upon ex perience and not upon scientific knowledge of crop foods and soils But they have their reasons for them The soil in which the spring crops are grown is called *dathoi* or *bhadwir* according as it has or has not borne a crop in the autumn immediately preceding the former name from *datha* a stalk as the stalks are generally left in the hurriedly prepared ground the latter from Bhádon the month in which they begin to plough the field In single cropped land the chief con ideration is the full utilisation of manure care being taken to sow in land which has been heavily manured and which will not have been exhausted by the single crop only such valuable crops as must have manure to bring them to perfection In double cropped land the nature of the crop to follow is chiefly determined by the date at which the autumn crop is cut and the interval thus afforded for the preparation of the soil Thus maize which is cut early and always manured is generally followed by wheat Cotton is for the same reasons usually followed by cane which is also often sown after *ja*

Rotation of Crops

wár, manure being added Cotton is often sown after cane or wheat, and wheat will often follow cotton or cane, with a season's interval *Jawár*, which is very exhausting, is seldom followed by any spring crop except gram Rice is almost always followed by gram or mixed grains, the stiff wet soil being in many cases incapable of producing anything else, while the pulse following the cereal does not seem to suffer, judging from the crops often produced And in the swampy canal villages, where the whole area is often too wet to grow anything but rice, barley is perforce sown in every field in the spring, not because there is much hope of a tolerable grain crop in the swampy fields, but because some sort of fodder *must* be had, and rice straw is of but little use Manured land is never allowed to rest more than one season at a time, while the highly-manured land close to the town will yield, with the help of vegetables and *chura*, three or even four crops in a year Even unmanured land is not often given more than one season's fallow, *jawar* and gram being commonly grown year after year without intermission But, except in rice land and swampy villages, land is seldom double cropped without manure

Note —Much valuable information on the subject of the agriculture of Northern India will be found in Mr Wright's Memorandum on the Agriculture of Cawnpore, and in Elliot's Glossary, Part III, under the head *Asarhi*

CHAPTER XIII —CATTLE FARMING

485 Horned Cattle —Kine or *dhenu* consisting of buffaloes and cows are kept by almost all villagers and their milk furnishes the only animal food which they as a rule enjoy In the Nardak where pasture is extensive and agricultural produce precarious they form the mainstay of the people while in every village the surplus *ghi* produced forms a substantial addition to their income Statement VIII shows the number of cattle as ascertained in the settlement census Since then the grass famine of 1875 77 has killed enormous numbers Of the two kinds of kine the buffalo is infinitely the more valuable If a villager loses his cow he only grumbles a little harder than usual if he loses his buffalo he sits down and cries A female buffalo (*bhains*) is worth Rs 40 to Rs 100 After four years old she will give a calf every 18 months to the number of seven or eight or even more The heifers (*jhotri katri*) are not sold but the steers (*jhotra katru*) are gelt and sold when some two years old to be used as pack animals They are called *jhota* when grown up The buffalo eats all the coarse swamp grasses which the cow will not touch and which would otherwise be useless and as long as they have a daily bath in the pond are hardy animals

486 The cow (*gai*) is worth from Rs 10 upwards After four years old she will calve once in every twelve to eighteen months on the average generally in Chet or Baisákh She will calve about six times The steers (*bahra bachhra*) are gelt and kept for the plough as oxen (*balad*) or sold at three years old for from Rs 15 to Rs 20 The heifers (*bahri bachri*) are seldom sold unless they drop their young

487 No care is taken about the breeding of oxen the bulls (*bijar khaggar*) being simply the young bull calves let go on the occasion of a death The buffalo bull (*bhainsa*) is sometimes chosen by a group of villages and let loose but it is often let loose in the name of *Devi* or of the *Pír* and these latter may be of any sort of breeding Both sorts of bulls roam about the jungles and mingle with the herds at pasture To give the bull to a cow is *dhandna* to a buffalo *phalna* to calve is *bidna*

487a Grazing and Food —The cattle are grazed in herds (*gol*) by herdsmen (*páli*) usually boys and lads except in the Rajput tract where men go also for fear of attempt at theft In the cold weather they go out as soon as the dew is off the grass and return at sunset In the hot weather they graze from dawn till 11 A M and from 2 till

evening, returning to the village to drink in the middle of the day In the rains they also graze for three hours before dawn, returning to the village to be milked This last is called *pasar*, and has a great effect upon the milk, the cattle grazing more freely when not teased by heat and flies The plough cattle often go for *pasar* both before dawn and after sunset in the rains When a cow is in milk she gets about half a seer of grain, and if there is no good grazing 5 seers of fodder daily, a buffalo in milk gets twice as much

488 The principal kinds of grass have been described in § 43ff During the rains a splendid crop springs up, and all the ponds fill with water In the Nardak the villagers fence off grass-preserves (*bír*) and cut and stack the grass for hay when it is ripe During the rains and cold weather large herds come, if the season is a good one, from the sandy Bangar, and settle down in the Nardak jungles, leasing blocks of pasture, or paying so much per head By the end of the cold weather the grass is all eaten and the ponds dry, and the cattle have to leave the Nardak for the canal and riverain tracts, or for the valleys of the Siwaliks On the other hand, the cattle of the canal and Khadir tracts are in many parts driven out of their villages by the floods in the rainy season, and have to take refuge in the higher parts of the country

489 Milk and Butter—A buffalo will give 6 to 10 seers of milk daily for eight months, and each seer will make a *chitank* of *ghi*, a cow will yield 3 to 5 seers daily for five or six months, but each seer will only produce half a *chitank* of *ghi* The first milk after calving is offered to Bhúmia and the Snake-god, or sometimes given to the beast herself to drink, otherwise the milk will turn bloody The calf has all the milk for 10 days, on the 11th it has a rope put round its neck, and the owner begins to use the milk

490 The milk is boiled at night in a vessel called *karhauni*, and a little sour curd (*dehi*) put in to turn it, which is called *jamana* Next morning the milk is turned into a *jhauli* or churn, and the churn staff (*reyi, ravi*), made of *kair* wood with four arms at the bottom, is put in, and a cover (*chákra*) put on through which the *reyi* passes A string (*neta*) is wound round the staff, and it is spun alternately each way by pulling the ends of the string This churns (*bilona*) the milk The butter comes in little globules (*rawa*), and is skimmed off and put into a vessel Its collective name is *tíndi* or *naini*, and the butter-milk is called *lhasi*, and is drunk The butter is then melted, and the water with its impurities (*chhach*) being strained off, *ghi* remains This is put into a vessel called *bára* till enough is collected to take to the *Banya*, or as they express it, to change the *bára* The word is probably from *Bár*, Saturday, as no *ghi* must be made from the Sunday's milk[1]

490 [1] C N W P ii, 229

Traffic in Cattle

491 Diseases of Cattle—The chief diseases to which cattle are subject are as follows —

Garar or *garra* This is the most fatal of all especially to buffaloes The mouth and nose run the tongue and throat swell the papillæ of the tongue stand erect and the animal dies in a few hours apparently suffocated

Rori or *pairi* The feet and mouth swell and fester and cholic and diarrhœa are present The animal generally recovers

Mand is dysentery which generally kills the patient.

Jar In the rains when the grass is young the cattle get giddy and fall down especially buffaloes It is seldom fatal

The *reh* of the canal tract gives the cattle glandular affections and diarrhœa and pulls them down they are therefore sent after a year or two to the highlands to recruit which they do in a few months

Pora is used also for any epidemic cattle plague When it attacks a village the first animal that dies of it is buried instead of being given to the *Chamárs* and water is sprinkled on the track (*ghasit*) along which the corpse was dragged The beam of a plough (*halis*) is buried upside down in the gate of the village with the top sticking out and a charm (*totka*) consisting of a garland of *siras* or mango leaves with a mud platter inscribed with mystic words by a *faqir* is hung across so that the cattle must pass under it If an animal gets lame an oval mark with a cross in it or Solomon s seal or Shiv s trident or the old Aryan mark of the need fire in general shape like the Manx arms is branded on the limb affected A *nali* or piece of the coloured thread used in religious ceremonies is a powerful charm if tied round the leg of the animal All cattle that die on Saturday or Sunday are buried instead of being given to the *Chamars*

492 Traffic in Cattle—The cattle dealers of the tract are *Banjárás* the commissariat agents of the old Emperors since the time of the Lodis[1] These men come up from the east in the cold weather with letters of credit to large amounts buy up all the young steers and take them back again for sale Of course a good deal of local traffic goes on also and the people will go great distances to get good animals The best cattle come from Hissar and its neighbourhood Ownership is transferred by putting the rope by which the beast is tied into the purchaser s hand and the latter giving Re 1 or so of the price as *sai* or earnest money Milch cattle are sometimes taken on trial for a day or two but if the seller wishes to settle the matter at once he flings his stick on the ground in front of the beast and if the buyer takes the animal over the stick the bargain is irrevocable No

492 Ell 100 H 1 298 N W P 52 Gl s 60

Sheep and Goats.

Hindu will sell *gokru* or *goká*, which includes everything born of a cow, to a Musalman for fear it should go to the butcher And no villager will buy or sell cattle, leather, or ghi on Saturday or Sunday, or on the great Diwáli When he has bought a beast, he will watch to see whether it dungs or stales first , the former is a good omen, the latter a bad one He will also make obeisance to the first dung A buffalo calf born in Mágh is unlucky, and must be given to the Gujrati and not sold

493 Sheep and Goats—Considerable flocks (*rewar*) of these animals are kept in the Nardak, and in such Khadir villages as have large pastures Where the villagers are Musalmans the flocks sometimes belong to them , but they are more commonly the property of the city butchers, who send them out to graze in the villages The sheep are all of the ordinary black small-tailed breed They are generally tended by Gadarias who make blankets of the wool The dung is used for manuring tobacco , but is not much valued, and I believe never bought

494 Horses—There are singularly few mares in the tract, and what there are are, as a rule, poor There are three Government stallions kept at Múnak , and the stud stallions serve branded mares free But the local breed is not good , and in fact it is only the richer headmen and notables that keep a horse at all A foal dropped in the day time is so unlucky that nobody would knowingly buy it, and it should have one ear cut at once, so that a purchaser may not be deceived The expression used for selling a horse is " to marry " it (*shadi karna*)

495. Other Animals.—Pigs (*bad*) are kept in large quantities by the sweepers in the villages, and the *Khatiks* in the town The Karnal breed of pigs, which is a very fine one, dates from the time of the old cantonments, and large droves of those very superior and strictly home-bred pigs which are to be bought in the neighbouring cantonments may be seen constantly going from Karnal, where they have already attained a considerable age, and acquired the local tastes of their race

Donkeys are kept solely by potters, and do all the petty village carriage There are many of them in every village The sweepers of almost every village keep fowls in some quantities

CHAPTER XIV—MANUFACTURES

496 Village Manufactures—I have collected less information than I ought on this subject but the processes followed are probably almost indentical throughout the Punjab The only manufactures prosecuted in the villages are weaving in cotton and wool rope making making pottery and bricks and minor handicrafts such as the making of baskets and mats They are all conducted either by the people themselves or by the menials the latter either providing the finished articles as part of their *begar* or being paid for their work almost always in grain The products are always of the roughest description and for better finish the people have to go to the towns I give below a few notes on some of the principal manufactures Spinning and weaving are described fully by Mr Baden Powell[1]

497 Rope making—The fibres used for rope in order of excellence are *sani san munj dab* and *khajur* the preparation of each of which has been described under the head of the plant from which it is obtained The villagers make all their ropes themselves

They take the raw fibre (*punja*) and spin it (*batna*) into thick string by rubbing it between the hand and winding it round a cross stick (*dhera*) which they spin round as they gradually form the strand If the rope is too thick to treat so two men take it one by each end and twist it between them (*antna*) or the following very ingenious spindle (*charkha*) is used One end of the rope is tied to a stick fixed in the ground and the other to the end of the spindle The latter is rotated by a man pulling alternately each end of a string which is wound round it and has its middle passed in a loop round an upper spindle the two ends being brought round the lower spindle both in the same direction so that whichever is pulled the spindle turns the same way the other end slipping loosely round it

498 If a stranded rope is to be made two or three strands (*lar*) are taken tied at one end to a tree and the strands twisted tightly together (*saletna*) by means of a small stick inserted between them

Thin rope or thick string is called *ban* or *jewari* It is made of *munj* or *dab* and is used for bedsteads and as string An ordi

nary rope is called *jewara*, a very thick rope for carts, *ras* or *dammras* These are generally made of *sani* The *mal* and *lao* are made of strands as above, but three small strands (*tanda*) are first twisted into a *ladda*, and two *laddas* into a *mal*, or three into a *láo*

500 Pottery.—The potter seeks for the stiffest clay he can find, beats it, chops it up, works it well with sand and water, and makes it into rolls (*pindi*) He has a wheel (*chak*) made of clay, with a heavy rim hanging down below it so as to keep the centre of gravity low This rests on a wooden bearing called *khili* or *taola*, and is spun by a stick (*chagreti*) inserted in a groove (*gulli*) near the edge The roll of clay is put on the centre, and hollowed out and shaped between a flat wooden dubber (*thapa*) with which it is pressed outside, and a piece of clay of the shape of an inking pad (*kunuri*) held inside and opposite it to give a firm resistance Water is sprinkled on with a dab of cloth called a *parola* The finished vessel is cut off with a string called *chiwan* It is ornamented with stripes (*chutta*) or gashes, and set to dry The kiln (*awa*) is made by building up three sides with bricks In the back of this the vessels are piled up one on top of another (*jeth*) with dung-cakes filled in between The whole thing is then covered up with shards mixed in among straw and refuse, and a little earth on top It is lighted from below, and burns for two or three days No atttempt is made to regulate the fire, except by the distribution of the fuel in the first instance

501 Brick-making—The people make their own unburnt bricks for themselves They dig the clay from the tank, work it up with water into *tagar*, spread it out into a layer of the required thickness, divide it into bricks by two sets of cuts crossing each other at right angles, and allow them to dry in the sun If they are to be burnt, the potter takes a contract at some Rs 30 to Rs 40 per lakh He moulds them in a small mould, ranges them in stacks to dry, and bakes them piled up in a brick kiln (*pazawa*) just as he does earthen vessels, with manure and refuse

502. Town Manufactures—In the city of Karnal several handicrafts are carried to great perfection, being relics of the days of the old cantonments Especially is it famous for its shoe-making, many thousands of boots being sent from it to regiments all over the country

The city of Pánípat is famous for the manufacture of copper and brass vessels and of skin jars (*kúpa*) for holding *ghi* and oil, and exports them in considerable numbers There is also a glass foundry, the operations at which are described by Mr Baden-Powell[1]

502 [1] P M 237f

CHAPTER XV—TRADE AND COMMUNICATIONS

503 Exports and Imports—It is not at all my intention and is indeed not in my power to give anything like a complete view of the trade of the tract But a slight sketch of its general course will be interesting and as a foundation for it I give an abstract of the customs returns for the trade passing east and west through the Panípat district in 1832 33 At that time the trade north and south went chiefly *viâ* Hánsi Hissar and not through Karnal excepting salt which passed up from Jhajjar through Karnál to the Punjab in great quantities

Trade passing into the Doab

Goods	Maunds	Customs duties [illegible] up
		R
Oilseeds	58 616	8 794
Cotton	0 5 0	10 60
Salt	65 107	90 057
Sal ammoniac	2 583	2 067
Iron	4 ,66	3 400
Timber		5 200
Wool	641	481
Miscellaneous		3 008
		1 23 61

Trade coming from the Doab

Goods	Maunds	Customs duties [illegible] up
Sugar	2 75 017	87 082
Gur	2 42 546	24 554
Cloth	1 67 880 p	5 183
Leather		1 50
Safflower	3 48	2 820
Miscellaneous		3 580
		1 24 721

Ghi is not mentioned and probably did not pay duty

Course of Trade

504 The course of trade thus indicated has been entirely changed by the construction of the Railway and Grand Trunk Road, the mass of the external traffic now passing down these two arteries, the former being used for long distances, while the latter is still preferred for short ones The only really important traffic east and west is that which flows to the great sugar mart of Shámli in the Muzaffarnagar district, the carts generally taking salt there from Bhiwáni, or *bajra*, *moth*, oilseeds, and *ghi* from the highlands, and bringing away *gur*

The Khadir and canal portions of the tract produce a surplus of wheat, cotton, gram, and fine rice for export, and import salt, *bajra*, oil, and oilseeds, iron and piece-goods The Nardak exports *ghi*, hides, wool, and in a good year large quantities of gram, and imports the same things as the rest of the district, with the addition of sugar

505. Course of Trade —The local trade is principally conducted through the village Banyas who deal with the larger traders at the two marts of Karnal and Panipat, the latter of which town lies on the direct road to Shámli But it is surprising how very considerable a trade is locally conducted by the villagers themselves, and especially by Játs from Rohtak These people in the hot weather, when the bullocks would otherwise be idle, start with their carts, bring salt from Bhiwáni or *bájra* and *moth* from Hánsi and Hissar, exchange it for gur or cotton in the villages, take this up into the highlands and exchange it for gram, and finally sell the gram at Karnal or Pánípat, either buying sugar to take back, or carrying piece-goods, &c, for hire So, too, men from Kaithal and Patiala will bring down gram or *ghi* on pack buffaloes, cross into the Doab where they buy oil or oilseeds, and return and exchange them for *gur* to take home And the Delhi traders often send up agents to collect cotton or *ghi* in the villages, and bring it direct to Delhi This local traffic is of immense advantage to the people, as they deal direct with the carters instead of with the local Banya, and always get a better price than he would give When the people of the tract themselves engage in similar operations, of course the profit is still greater But this is not often the case, as in irrigated tracts the bullocks are seldom at leisure

506 Such *gur* as is not absorbed in this manner goes to Shámli, the cotton and wheat to Delhi and Ambala, and the *ghi* and hides to Delhi Oil and oilseeds come from the Punjab and the Doab, *til* and *sarsam* from the former, *arhar* and *tára mira* from the latter Timber comes from Ambala, iron and piece-goods from Delhi, salt from Bhiwáni, Delhi or Ambala

The petty articles needed by the people and not produced in the villages are supplied by small hawkers, who buy them in the cities and travel about the villages, exchanging them for grain Gangs of travelling blacksmiths, too, are not uncommon, who do finer work than the village blacksmith can attain to

Communications

507 Communications —The roads of the tract are shown in map No XII The Grand Trunl Road from Delhi to Ambala *via* Panipat and Karnal is the only metalled road in the district The unmetalled roads so far as they lie in the canal tract are generally bad and when they get into the zone of swamps due to the canal all but impassable a single cart having but little chance of getting along till others come up and the cattle can be doubled But the Khadir roads though often heavy with sand are otherwise good and those in the highlands are generally admirable Communications with Rohtak Hissar and Kaithal are good but the *nelt* or flooded belt bordering the Saruswati and Ghaggar completely cuts off the Patiala highlands for all wheeled conveyances and though a road has been made beyond Kaithal towards Patiala I fear it will be of but little use The Ambala railway station is 48 miles from Karnal and the Delhi station 53 miles from Panipat the road being metalled throughout Jagadhri is the nearest station being barely 40 miles from Karnal but unfortunately the road otherwise a good one runs along the crest of the Khadir and is so cut up by drainage from the Bangar as to be almost useless

508 The village roads are in the highly cultivated parts unspeakably bad They are exceedingly narrow and the banks which protect the cultivation being dug from the soil of the road they become veritable sloughs in the rains while in the canal tract the frequency of standing water the want of bridges and the slipperiness of the salt impregnated soil when damped by a shower makes the road always difficult and often almost impassable and carriage throughout the tract infinitely laborious

Assignments of Land Revenue.

CHAPTER XVI —MISCELLANEOUS

509. Assignments of Land Revenue—Within a very few years of the establishment of English rule, the revenue free tenures of the tract came under investigation The claims brought forward were numbered by thousands, forged grants manufactured at Delhi found a ready sale in the tract, there was hardly a village in which assignments of revenue were not asserted to have been made, good land was claimed in the place of bad in the most unblushing manner, and the revenue recovered by Government on land resumed as having been held free on invalid titles amounted to some Rs 20,000 annually The investigation dragged on in a very dilatory manner, and may be said to have been only really concluded during the present settlement The revenue free villages or considerable parts of villages as at present existing, are shown in map No IX Small plots are indicated by a red dot only

510 Assessment of assigned revenue—At first no sort of settlement was made of any land of which the revenue was assigned, the assignee being left to collect rent from the owners So long as the Government practically took the whole rent in the shape of revenue this omission was of no importance , in fact, the owner of such land was better off than he who owned land assessed to Government revenue, for the former paid a demand varying with the seasons, the latter, a fixed demand of excessive severity But as the Government revenue became gradually so limited as to leave a margin of profit for the owner, attention was attracted to the fact that, unless we interfered between the owner and assignee so as to secure to the former the same margin of profit which he would have enjoyed had the revenue of his land not been assigned, we were doing him an injustice, and conferring on the assignee larger rights than we claimed for ourselves, and therefore larger than we had it in our power to alienate This view appears to have been first authoritatively accepted for this part of India in 1839, when the Sadar Board pointed out that where the assignment had been made by the British Government, it " could have had no intention to inflict injury on all the resident proprietors of the pargana, or to compromise the rights the maintenance of which had been pledged to them in common with their fellows throughout the country by Regulation XXV of 1803 , and that Government had always declared that in granting jágírs or other lands, they merely proposed to assign away their own revenue, and not the rights of the people That Government would also appear, though somewhat tardily, to have at last received the conviction that the only way in which the ruling power could do its duty and secure the rights of the proprietors in such cases, was to come forward and make similar arrangements on behalf of the assignees of these revenue free holdings as it makes with communities paying revenue to Government"

Previous Settlements of Assigned Revenue

511 But the Board went further than this and extended the same principle to *all* assignments including such as had been granted under native Governments and only confirmed by the British It remarked — The same rule appears to the Board to hold good as regards all free holdings and wherever a resident occupant community are found in possession of land assigned as rent free they should as provided by section 17 Regulation VII of 1822 have similar terms made in their behalf with the Government assignee as the people of the neighbourhood obtain directly from Government The Lieutenant Governor N W P accepted these principles in his No 1058 of 9th August 1839 he pointed out several capital instances in which they had already been acted upon and remarked that he believed that every rent free holding small and great had been already subjected to this process in the districts in which the revised settlements had been concluded Upon this the Board remarked that the principle had thus been declared applicable to every rent free holding small and great called for a report at once upon the larger holdings and remarked that the smaller holdings would be dealt with as the investigation into revenue free tenures was completed for each district The principle was embodied in § 117 of the Directions to Settlement Officers and the settlement of the Mandal tract was effected in accordance with it in 1847

512 Previous Settlements of Assigned Revenue —In the settlement of 1842 the Settlement Officer proposed to settle villages of which the revenue had been assigned together with the Government villages of pargana Pánípat But he was directed by the Board not to interfere as it was not the wish of Government that sub settlement should be made with the proprietary communities in *maafi* estates Accordingly no records were prepared and the assignees continued to realise rent till 1850 The omission to make a proper settlement was then brought by petition to the notice of Government which called for a report and remarked that if the rights in confirmed revenue free villages in the Delhi division have hitherto remained undetermined it is time that this state of things should cease The Board reported on the question which in that tract concerned only grants made by former Governments and confirmed by us The Senior Member held strongly that the native Government which had made the grant had put the assignee in the position of landlord with the power to collect rents and that it was unjust to form a theory' that the Government had no right to alienate the rights of the owner and to reverse an arrangement of long standing The Junior Member pointed out that what was proposed to be done was to ascertain and record existing rights and that the Senior Member s objection did not touch the advisability of this process The Lieutenant Governor agreed with the Junior Member and directed all existing rights in revenue free holdings to be investigated and adjusted Accordingly between 1850 and 185? records were prepared and summary settlements made for all lands of which

the revenue was assigned In some few cases the demand thus fixed was so high that the owners preferred to continue the old terms, but, as a rule, the settlements then made have been acted upon till now

513 Property in land, the revenue of which is assigned — Unfortunately, too, the records were not prepared as carefully as they should have been, and the record of ownership is sometimes indefinite or entirely wanting In some of these cases the revenue assignees of plots of land, locally called *milk* to distinguish them from assignments of villages or share of villages, have claimed ownership in the present settlement, and I have little doubt that some of them will appeal to the civil courts as soon as the record is sanctioned I would therefore quote here the words of Mr Hugh Fraser On the 27th May 1829 he wrote —"The *milkis* in this district have not on any occasion that I am aware of laid claim to any proprietary right in the soil All they contend for is, that share of the produce which would belong to the State if the land had not been alienated This is the opinion of every *milki* that I have ever spoken to on the subject" Again on the 2nd August 1831 he writes —"In this district the zemindar's right is not only distinct from, but scarcely ever belongs to, the person on whom has been bestowed the Government share of the produce From among the hundreds of *milk* tenures which I have had occasion to investigate during my residence in this district, I can only recollect one instance in which the *milkis* claimed the *biswahdari haqq*, and in that case a distinct *qibalah* was forthcoming"

514. Regulation Law regarding Assignments of Revenue — The revenue free holdings of the Delhi territory being released under the Regulations, or in accordance with the spirit of them, are subject to wholly different rules to those which govern similar tenures in the rest of the Punjab These will be found summarised in my report on the revenue free investigations of the present settlement

515 The Mandal Family —The Mandals, or as they are sometimes called Marals, are said to be a family of *Múla Jats*, or Jats who have been converted to Islam They generally call themselves Pathans, and they affect the Pathan affix of Khan to their names They also sometimes assert that they are of Rájput descent, and the poorer Musalman Rájputs occasionally marry their daughters to them, but under no circumstances would a Rájput marry a Mandal woman, and the latter marry only within the family, which being very limited in numbers, many of the girls remain unmarried There is, I believe, no doubt that they are of Ját origin They come originally from Samána in Patiála, where the word Mandal seems to have some local meaning* The family tree is given below so far as regards the Karnal family, daughters not being shown in it

* Ell in, 245—*cf* *mandela*, a platform on which guns are mounted, and *mandal*, the sacred space traced by the Brahmans at marriages, which is in the shape of a fort with four bastions The word *mandal* appears to mean village headman in Bengal

The Mandal Family

Ghulám Mahomed

Jalál Khan | Moháy-ud-Dín Khán | Yár Mahomed Khan | Mahomed Atar Khan

(Sons of Jalál Khan)
- Sl... l D... (g... l gr... tee), *D S P*
- M...h...nd Khan, *Branch I*
- P...hím Bakhsh
  - Mahomed Ishaq, *Branch II*

(Sons of Moháy-ud-Dín Khán)
- Gh...rat Ali, *Branch III*
- Did...r Bakhsh, *D S P*

Branch I, Já...
M...h...md Khan
Ahm...d Ali

(Sons of Ahmad Ali)
- R...h...at Ali, *D S P*
- M...hf... Ali, *Gl... D S P*
- Azmat Ali
- R...t... Ali, *Ghat*
- U... Da...a, *Gl*

B...ch II, R 5 000
Mah...n...l Isháq

(Sons)
- Amír Ali
  - Mahomed Ali, *D S P*
  - Gl...lán I...s...l, *Gl, R 2 500*
- Sultán Dín, *D S P*
- N...r Ali
  - Rahm Ali
    - M...h Iláhi, Karm Iláhi, *R 1 250*
- W...i Ali
  - Shá...h...r Ali, *R 1 250*
- G...lín Khan, *III*

Branch III
Gh...t Ali

- Gl...lám Sh...f
  - Q...tb-ud-Dín
    - S...d...t Ali, *Rs 1 250*
  - N...j...b...t Ali, *Gha R 1 250*
  - Q...m...ul Dín, *R 1 250*
  - Akb...r Khan, *Rs 250*
- Bish...t Ali, *Ill...*

N... — Th... figu... th... q... h m mb... f... mly ... Ill... g... m... ll g... t m t... Gh... m... b... gh... f... l w... t w f...

516. Mandal Grant and Tenure of Pargana Karnal.—There has been so much dispute and uncertainty about the terms upon which the Mandals enjoy the grant, and the correspondence on the subject is so inaccessible to any one who is not prepared to go through the letter books for 38 years page by page, as I have done, that it will be well to give a somewhat detailed account of the tenure and its incidents His Honour the present Lieutenant-Governor, when Financial Commissioner, directed me to pay special attention to this matter Unfortunately much of the most important correspondence is missing

517 In 1780 A D Nawab Majíd-ul-daula granted to Nawab Sher-ul-din Khan the parganas of Muzaffarnagar, Shoran, and Chitráwal in the Muzaffarnagar district, on condition of his furnishing for Government service 200 horsemen fully equipped, and on the death of the grantee in 1789, the grant was continued on the same terms to his brother Mahamdi Khan by Daulat Ráo Sindia.

518. In 1806 this Mahamdi Khan, with his nephew Mahomed Isháq and his cousin Ghairat Ali, was in possession of these estates, and in accordance with the policy of Lord Cornwallis (§ 94 *supra*), they were induced to consent to an exchange of their possessions in the Doáb for an equivalent tract west of the Jamna They accepted the proposal with reluctance, and it is said that the estimate that they submitted of the yearly rental of the Muzaffarnagar estates, which they valued at Rs 40,000, was much below the truth, the Collector of Saharunpur estimating the real income at Rs 65,000 The 63 villages in pargana Karnal which were then assessed to Government revenue, were estimated to yield Rs 48,000 yearly income, and in order to induce them to accept the exchange the more readily, it was arranged that they should receive so much of pargana Karnal as had not been already granted to others, comprising very many estates not included in the above estimate, and should relinquish the Muzaffarnagar service grant, Mahamdi Khan retaining, however, a smaller separate jágír in that district which had been assigned to him personally

519. The transfer was effected by a grant signed by Lord Lake and dated 24th March 1806, the translation of which, made and filed with the Supreme Government records, runs as follows —

"Be it known to the present and future mutsadis, chaudhris, qanungoes, muqadams, and cultivators of the pargana of Kárnal in the Sarkár and Súbah of Sháhjehánábad, that the British Government has at this time for good reasons resumed, with the exception of their ancient *jágír*, the *jaidád* held by Mahamdi Khan, Ghairat Ali Khan, and Isháq Khan in the Doab consisting of the mahals of Shoran, Chitráwal, and Muzaffarnagar, with certain villages thereunto belong-

Mandal Grant and Tonure of Pargana Karnal

ing from the beginning of the month of Asarh 1214 F and has in lieu thereof assigned to them the whole of the pargana of Karnal with its fortress and town with the exception of the sayer maafi jagir villages yomia punarth &c which have been in force till the end of the Rabi 1213 F From the beginning of the month of Asárh 1214F there fore the above district has been assigned by the British Government in jagir to the above mentioned persons during the term of their natu ral lives The mutsadis &c aforesaid must consider them as the es lished ámils and be ever ready to obey their orders and pay the re gular revenue to them The aforesaid Mahamdi Khan &c must on their part exert themselves to satisfy the ryots by the justice of their rule and must endeavour by every means to promote the welfare and prosperity of their country and its inhabitants and act accord ingly

520 The Mandals accepted the grant but begged that some provision might be made for their children and proposed that the pargana should be continued to their heirs on a fixed quit rent The Supreme Government which as before remarked (§ 94 *supra*) was only too anxious to get rid of lands west of the Jamna, and wished to make what was felt on both sides to be really a compulsory exchange acceptable then added a supplementary grant also signed by Lord Lake and dated 9th April 1806 their authorized translation of which runs as follows —

Be it known to the present and future mutsadis of the pargana of Karnal in the Subah of Sháhjehánabád that the villages of the pargana of Karnal to the amount of Rs 40 000 have been granted in jagir to Mahamdi Khan Ghairat Ali Khan and Isháq Khan Mandals for the terms of their natural lives from the beginning of the year 1214 F with the exception of the established maafis sayers yomias and punarths and as the aforesaid persons have never been wanting in their duty to the British Government His Lordship had been therefore graciously pleased from the regard which he entertains for their good conduct to grant the above mentioned villages with the exception of the established maafis &c to the heirs (*warisan*) of the above mentioned persons to be holders by them after decease in *istamrár* on condition of paying for the same an annual rent of Rs 15 000 of the current coin

521 In pursuance of these grants the three assignees were put in possession of tl The fort was shortly afterwards Rs 4 000 com pensation paid for arrel with each other the chief matter of dispute being Mahamdi Khan s claim to be considered the head of the house On the 16th July 1807 they divid ed the villages among themselves by a deed attested by the Resident

at Delhi, according to the following estimated annual value —

Mahamdi Khan	Rs 15,000
Ghairat Ali	„ 13,000
Ishaq Khan	„ 12,000

the city of Karnál and one or two other estates being still held joint

522. Neither of the original grants had given any detail of the villages granted, but a list of the 63 villages assessed to revenue and estimated to yield the Rs 48,000 was on the file, and in 1816 the Principal Assistant attached all the villages not included in this list, which constituted a very large proportion of the whole pargana The Resident demurred, but held that the heirs (and one of the original grantees had just died) could certainly only claim the specified villages The matter was referred to the Supreme Government, which in its letter of 15th March 1817, declared that the records at headquarters clearly showed that "the intention of Lord Lake, which was confirmed by the Governor-General in Council, was that the Mandal chiefs should hold the pargana of Karnal in jágír, and their descendants in istamrar on the terms of the second grant" The voluminous correspondence which ensued on the subject gives very full particulars of the history of the grant, and the papers forwarded with Supreme Government of India letter of 15th March 1817 to the Delhi Resident, which forms a part of it, show clearly that by "descendants" was meant "descendants in perpetuity"

523. Minor assignments of revenue within the Mandal holding—In 1842 it was found that the Mandals were enjoying the quit rent of the two villages of Goli and Waisir, which were assigned at a fixed demand to a Bairági monastery in the former, and its branch in the latter village Waisir was many miles from pargana Karnál, but Government, N W P, in its No 1333 of 29th July 1852, directed that they should continue the enjoyment

524 In 1852 a question was raised as to who should enjoy the revenue assessed upon the subordinate revenue free tenures which had been expressly excluded from the grant, in the event of their resumption The Government, N W P, in its No 2636 of 26th June 1852, ruled that though the Mandals were not entitled as of right to such revenue, which properly belonged to Government, yet the revenue assessed upon resumed revenue free plots of less than 50 bighas might be relinquished in favour of the Mandals, that entire villages, when resumed, should invariably lapse to Government, and that intermediate tenures should, in the event of resumption, be specially reported for orders in each case Half the villages of Bahlolpur and Dingar Mazrah have since been resumed, and have reverted to Government, while a resumed holding of more than 50 bighas was reported, and the assessed revenue, which amounted to Rs 14 only, was, under the orders of Government, made over to the Mandals

525 Conversion of part of the Istamrar into Jagir — In the mutiny Nawab Ahmad Ali Khan did admirable service and the Government of India in its No 1341 of 24th March 1858 to the address of Chief Commissioner Punjab remitted the quit rent of Rs 5 000 payable by him in favour of him and the heirs male of his body *lawfully* begotten in perpetuity thus converting his *istamrari* tenure into a *jagir* But the actual words of the grant would seem to be to him and his male issue from generation to generation without any limitation as to legitimacy There is every probability that the line of male heirs lawfully begotten will cease with Azmat Ali the present Nawab

526 Primogeniture among the Mandals — In 1860 the Government of India affirmed the advisability of instituting primogeniture in tenures of this nature the Punjab Government inquired the wishes of Nawab Ahmad Ali (see Government circular No 2 of 25th May 1860) and it has been held by the district court in Azmat Ali s case of 1880 that Ahmad Ali executed an agreement to that effect which had no binding value

527 Record of Mandal Custom —No sooner had the Mandal family settled in their new home than they began to quarrel among themselves and their descendants followed their example with ardour The family was too new and too limited and their new style of too recent origin for any custom worthy of the name to have grown up and each was anxious to make for all the rules which suited his particular predilections or interests

By 1845 these disputes had risen to such a pitch of acerbity that they reached the ears of Government For the next 10 years the Collector the Commissioner and even the Lieutenant Governor himself vainly endeavoured to induce them to come to some understanding and to agree to some set of rules which should regulate the future interests of individual members of the family In 1850 a proposal was before the Supreme Government for legislation which should make such family arrangements binding and the paper to be drawn up was at first intended to be brought under the proposed law Later on nothing further was contemplated than to obtain an agreement to which the courts would probably attach more or less weight and which would at any rate be acted upon privately

528 In 1848 arbitration was resorted to in 1850 a code was drawn up but in neither case was the consent of all the Mandals secured In the minute laying down lines for the revision of assessment of 1852 the Lieutenant Governor urged further efforts to induce them to agree upon a code of rules in failure of which they must be left to fight their own battles and ruin themselves In 1852 and

again in 1855, further drafts were prepared, but again objections, more or less frivolous, were raised

529. In the last code only one objection was raised, and that only by one member of the family Nevertheless, apparently wearied out by the futility of all attempts to obtain complete agreement, Government abandoned the attempt to frame any administration paper for the Mandals In Government No 3826 of 23rd December 1855, laying down the lines on which the revision of 1856 was to be conducted, the Lieutenant-Governor wrote —"It is not in the power of Government to compose these differences, and to establish definite rules by any arrangement prescribed by means of its own authority The istamrari tenure is subject in all respects to the ordinary operation of the laws and courts, and the hereditary grant, by the sanad of 9th April 1806, is generally to the 'heirs' of the three first grantees The claims of all persons who may be entitled to any portion in the inheritance must be received and determined by the court The proposal to form a binding *dastúr-ul-amal* under the superintendence of the Government officers can therefore no longer be persisted in, and the subject must be left to the voluntary agreement of the parties themselves, or to the course of judicial decision" This was written, of course, long before the Pensions Act of 1871, but the principle here affirmed has been followed by the Punjab authorities in their action in the case of Azmat Ali See Punjab Government No 570 of 4th May 1878 In appendix A will be found a complete abstract of the various customs of the family as fixed by the arbitrators in 1848, and as agreed to or dissented from in the four codes dated 1st April 1850, 30th October 1850,——December 1852, and 24th July 1855 *

530 Law governing the Mandal Tenure.—There is one point I would mention It has often been stated that the pargana was given to the present holders in exchange for their ancestral estates in Muzaffarnagar This I believe to be incorrect The pargana was granted *for life* to the three original grantees in exchange for a grant which had been made to Sher-ul-din, and after him to his brother The grant for life was made and *accepted*, and a formal agreement to that effect, dated 12th March 1806, was signed by the grantees, and the bargain, so far as any exchange was concerned, was at an end The Government *afterwards* added, as an act of grace and at the request of the grantees, the second grant dated 9th April 1806, and it is under this second grant that the Mandals now hold, the first grant having expired at the death of the grantees This second grant formed no part of the bargain or exchange, as the correspondence mentioned in the preceding sections of this report clearly shows The

* This abstract originally formed paragraphs 531 to 557 of the report It has now been removed to the appendices, and the series of paragraphs is therefore discontinuous

point is of importance because a mere confirmation of an old grant made by a native government or what is practically the same thing a fresh grant given in exchange for such a grant would be governed by Regulation law and there would probably be much more hesitation felt in prescribing any rules of succession than would be felt in the case of an entirely new grant originating with the British Government The grant of 1858 which only affected the quit rent and did not otherwise alter the tenure of the *istamrari* grant necessarily falls within the latter category and I believe that the same may be said of the second grant of 1806

558 Nature of the Mandal Tenure—In his review of my assessment report of pargana Karnal the Financial Commissioner raised the question whether on the face of the Government minute of 1874 quoted in § 143 *supra* the Mandals were not superior proprietors and entitled to something more than the mere Government revenue of the tract assigned to them The question was suggested by the fact that in the Government orders for the settlement of 1847 the relations between the Mandals and the proprietors of the villages were defined by a quotation from § 112 of directions to settlement officers which lays down the relation between inferior and superior proprietors or taluqdars and by the frequent mention of the Mandals as taluqdars in the correspondence of the day The question is such an important one that it will be well to state the grounds on which I believe that it must be answered in the negative

559 Whether the istamrari grant was or was not made in exchange for the old Mahratta grant it is beyond question that the assignment of the tract now held by the Mandals to them was wholly the act of our Government The village communities were at the time of the transfer in full possession of their rights in all the occupied villages Government possessed only such rights in those villages as it possessed in all other villages *viz* the right to receive the land revenue and it is hardly to be supposed that Government in making a grant on political grounds intended to convey to the grantees any rights which as belonging to the villagers it was not in the power of Government to confer upon a third person That no such possible transfer of property was intended seems clear from the Government letter quoted in § 143 *supra* and from the orders which accompanied it and which are printed at length in my assessment report Mr Secretary Thornton there speaks of leaving the subordinate proprietors to the mercy of *an assignee of Government revenue* of the obligation lying upon Government to see that *no wrong be inflicted by the act of assignment* and of the fact that there were *no doubtful claims of proprietary right to investigate the village communities remaining in all their integrity the unquestioned owners of the soil* The Government order goes on to say that the

Nature of the Mandal Tenure.

rights of Government were assigned to the Mandals, and that "the rights of the village communities had been superseded by the assignment" It is true that villages which had been unoccupied at the date of the grant, and which the Mandals had subsequently settled, were declared to be their property, but *khalsah* villages in the neighbouring tract which were similarly settled by Colonel Skinner were under the same policy declared his property, though he held them merely on a farm of Government revenue and solely on the ground of his having broken up the land as in this case the Mandals had done (see § 566 *infra*) The quotation from the directions does not show exactly the relation at present existing under the Punjab system between owners of land and assignees of its revenue It is merely quoted to show by what rules the Mandal collection of revenue was to be regulated, and I do not think any argument can be drawn from it to show that they were necessarily superior proprietors

560. That the early assessments were meant to be assessments of land revenue only, is sufficiently clear from the constant references to the revenue rates used in assessing Government revenue in neighbouring tracts, which were made both by the settlement officer in assessing, and by the superior officers in confirming, the assessments

561 It is true that in the early correspondence the Mandals are spoken of as proprietors But similarly, in the *khalsa* tract, the headmen who signed the engagements for land revenue are always spoken of as proprietors and the other owners as *ryots* in the correspondence of the time Nor can any argument be drawn from the fact that the Mandals took full rent from the owners up to the settlement of 1847, for the same custom existed in every village and plot of land throughout the district of which the revenue was assigned, even though the full proprietary right of the rent-payers was undoubted, and has been since recognized and acted upon without question The whole question is discussed in § 510 to 513 *supra*, which should be read in this connection

The fact that the Mandal claims were limited to just so much as the Government was entitled to demand, was clearly recognized in the very earliest correspondence of the day In 1810 Mr Fraser, the assistant who practically ruled this part of the Delhi territory for so many years, wrote of the Mandals as follows, after sketching the position of a jagirdar as a public officer of state and ruler under native Governments —"But though they hold the title of jagirdars under a grant or tenure so called, and receive the amount of the land rent of the district, by the British Government he is only looked upon as a privileged pensioner, and possesses neither the name nor authority of an executive officer under it His power is quite limited, and his exercise of right extends only to the demand of the legal and regu-

Present condition of the Mandals

lated right of Government to the land revenue of that portion of territory specified in his grant I could quote many similar passages As a fact the revenue demanded by Government was in those days far heavier than the rent taken by the Mandals

562 Finally I can say with the utmost confidence that the Mandals themselves fully recognise that their claims are strictly confined to the revenue which Government would demand from the estates if they were *khálsah* and have never entertained the idea of preferring any claim to proprietary rights though of course they would be ready enough to do so if such a course were suggested to them and there seemed to be any hope of success They have appealed again and again against successive reductions of assessment including those now made by me but the argument that they are entitled to anything more than the Government revenue assessed upon the land has never I believe been brought forward by them

563 Present condition of the Mandals—The constant and bitter disputes which have been rife among the Mandals ever since their first settlement in Karnal have had the effect which might have been expected upon their position as a family Other causes too have contributed to their decay As each generation increased the number of the family the sons all sharing in the inheritance of the father not only were relieved from the necessity of earning their livelihood but also felt it incumbent upon them to keep up as far as possible the style which was traditional in the family on a reduced income which was quite insufficient for the purpose Being almost without exception uneducated they fell wholly into the hands of an unscrupulous band of rapacious stewards who found their interest in introducing them to money lenders as unscrupulous as themselves The decadence of the family began early In 1817 Sir Charles Metcalfe wrote — They have suffered much since they were established in Karnal and the period of their transfer from the Doab was the commencement of the decline of their prosperity Their respectability in all external appearances has been dwindling away before my eyes in the course of the last ten years It may be said with justice that their decline is in some measure owing to their own mismanagement as they received an extensive district capable of great improvement It must however be admitted that something unfavourable in the change must also have operated otherwise why did not their mismanagement ruin them in the Doab where I remember meeting them in 1805 equipped in a style of considerable pomp and splendour Their present appearance is very different and their tone to me since 1806 has invariably been that of complaint Of course the position of a jagirdar was as pointed out by Mr Fraser very different under native and British rule and this difference would have been felt even if the Mandals had remained in the Doab On the point of mere in

Present condition of the Mandals

come, they have little to complain of The revenue of the pargana is shown below —

Year	Assessed revenue	Owners' rates	Total revenue	Quit rent	Net revenue
	Rs	Rs	Rs	Rs	Rs
1806, estimate	10,000		10,000	15,000	25,000
1847, settlement	1,04,961		1,04,966	15,000	89,966
1852, revision	1,00,901		1,00,901	15,000	85,901
1856, do	80,957		80,957	15,000	65,957
1876, current demand	80,058		80,058	10,000	70,058
1880, revision	60,670	14,595	75,265	10,000	65,265

Of course the assessments of 1847 and 1852 were never really realised, so that the reduction effected since then is partly nominal Even excluding from account the remission of Rs 5,000 quit rent in 1858 on account of special services, the net revenue is still Rs 60,265 against Rs 25,000 estimated in 1806 And the Doab was so comparatively fully developed in 1806, and the limitations of the Government demand which have been introduced since have been so considerable, that it is highly improbable that the revenue of their old holdings will now amount to so much as that of their present estate

564 The present Mandals are by no means favourable specimens of Indian gentry Ahmad Ali was a thorough gentleman, and a fine, intelligent, and active man Mahomad Ali, who is just dead, retained much of the old style But Azmat Ali, the present Nawab—for only the head of the family has a right to the title, though the other members are commonly called so—has been unfortunate, as all his father's care was spent on his elder brother, who died before him, and Azmat Ali is uneducated and unintelligent, though thoroughly amiable and respectable His legitimatised brothers have gained a decree for two-thirds of his estate and four lakhs of mesne profits , the case has gone to the Privy Council in appeal ,* and whether he wins or loses, the result must be disastrous Of the other members of the family, too many are ignorant, dissolute, unintelligent, and wantonly extravagant to an inconceivable degree Their estates are heavily encumbered with debt , and they neither have nor deserve the consideration or respect of their neighbours Even now the adoption of primogeniture would go far towards saving them , but I fear that

* The appeal has since been dismissed

The Skinner Family

Government has definitely adopted the view expressed by the Lieutenant Governor N W P in 1857 and in that case they must inevitably degenerate into a horde of petty assignees such as we have in Panipat

The present state of the holdings are as follows —

N f ly	No of hol	Name of Mandal holder	N ill g	Asses d e ue	O ners te	T t l re enu	Q it e t	Sh re J t p p ty
				R	R	P	Rs	
I	1	Nawab A mat Al I han	25	19 717	4 543	24 260		4
		Total of f m ly	25	19 717	4 543	24 260		4
II	2	Gh l m Pas l Kh n	13	9 867	1 520	11 387	2 500	
	3	Mahr Il hi Kh n	8	5 096	1 435	6 531	1 50	1
	4	K r Il hi Kh n						
		N h lf Nos 3 d 4 q lly h lf	1					
	5	Sha h Al Khan	10	6 971	735	7 706	1 250	1
		T tal of f m ly	32	21 934	3 690	25 624	5 000	4
III	6	Sa d t Al Kh	7	5 671	1 906	7 577	1 250	1
	7	Q m ld n Kh	8	3 681	2 111	5 792	1 250	1
	8	N j b t Al I h n	7/	5 31	735	5 966	1 250	1
	9	Akt r Kh n	7	4 436	1 610	6 046	1 250	1
		No 6 to 9 eq lly	1					
		T t l f f m ly	0/	19 019	6 362	5 81	5 000	4
		Th th ee f m l q lly on h s in l mn 9	6					
		Total of t t	93/	60 670	14 595	75 265	10 000	12

The revenue is that of the whole estate inclusive of subordinate assignments *inams* and the like

565 The Skinner Family —When the tract was first brought under settlement the Colonel James Skinner who made such a name for himself as a leader of irregular horse in the earlier years of this century and whose biography written by Mr Fraser forms such an interesting sketch of those times obtained in farm a considerable number of villages for the most part small ones which had been more or less abandoned by the communities who owned them He also took up the engagements for several of the larger villages the proprietors of which had refused to accept the assessment His management wa vigorous and successful he expended a great deal of capital in extending cultivation and introducing irrigation his careful personal super

Acquisition of villages in proprietary right by the Skinner

vision ensured the success of the undertaking, and the Government officials of the time constantly bore hearty testimony to his qualities as a landlord The people, who knew him as Sikandar or Mal... Sahib, speak no less admiringly of him Their common expression with regard to him is "*..lih to badshah tha*"— ... He was a strict landlord, insisted upon receiving his dues, and made his speculations exceedingly profitable, he ruled his villages with a strong hand, and stories are still current of the evil fate that befel malcontents who complained against him But he understood and liked the people, and treated them as they would be treated, he was personally known to all of them, he managed them through their own elders and made much of the headmen, and he knew how far a little seasonable liberality goes, and by distribution of turbans, a supply of sweetmeats for all who came to him on business, a ready ear to all grievances, and substantial ready relief in really bad cases, he won their hearts and their confidence

566 Acquisition of villages in proprietary right by the Skinner—At the regular settlement many of the ... villages which he then held agreed that his farm should be continued and refused to engage themselves Most of the small villages, which had come to him in a very low state, were then fully occupied by the original owners, such of them as had abandoned their homes having returned on matters improving Mr Fraser, the first Settlement Officer, offered engagements for these villages to the resident owners, but the Commissioner quoted a ruling of the Sadr Board to the following effect —"The reclaiming of waste land had always been considered by natural law and right to confer the best title to property In this country reclaiming waste land by the permission of the Government has always, as far as the Board is aware, been taken as the best title Under this view nothing can be more erroneous than the course which, during a certain interval, appears to have been followed in Delhi of taking away lands from those who had reclaimed, peopled, and continued to occupy them, and giving them to those who came forward when they found a valuable property created to their hands, on the ground of obsolete traditions of national or ancestral possession When land has been deserted, left waste, and returned to its natural state, and no one is found on the spot to maintain a claim to property or possession, it is the undoubted right of Government, whose duty it is to promote the perfect cultivation of its territory, to authorise any person who is willing to occupy the waste, and such occupant ought, both in practice and policy, to be considered the owner" This ruling referred to lands in Harrána, which had been "settled and reclaimed by emigrants from foreign parts," and the villages here in question had been settled and reclaimed by the original owners, with the assistance of Colonel Skinner The Settle-

ment Officer therefore vigorously protested against the application of the rule but the Commissioner directed that the engagement for the revenue should be made with Colonel Skinner leaving the own ers column in the records blank His merits as a landlord were well known and in only two cases was any effort made to dispute these orders The settlement of all these villages was made with Colonel Skinner at specially reduced rates in consideration of the capital he had expended upon them Colonel Skinner died in De cember 1841 and his eldest son Major James Skinner succeeded to the management of the family estate The mangement would appear to have changed for the worse for in 1853 the Collector reported that every single village complained of it A few years later Major Skinner died and was succeeded in the control by Mr Alexander Skinner the present manager The villagers attempted to have their farms cancelled on this occasion but were unsuccessful In the present settlement all the farmed villages have taken up their own engagements

567 In 1851 the Government N W P issued a notification No 4158 of 28th November (see Punjab Revenue Circular No 8 of 11th February 1852) directing that in all villages in which no owners had been recorded at settlement (technically called *khanah khali* vil lages) an investigation should be made and where no very clear title was shown by other parties the farmer with whom the settlement had been made should be declared owner and recorded as such other claimants being referred to the civil courts An investigation was accordingly made and the Skinner family declared owners of all the villages held in farm by them which fell under the above description Some few of the villages sued for proprietary rights but failed on the ground of long adverse possession on the part of the Skinners There is not the least doubt whatever that in almost all these villages the original proprietors were then residing and cultivating their ancestral fields and it is almost certain that the villages were not wholly aban doned when they first came into Colonel Skinner's hands The owners no doubt returned gradually as they did in all the small villages of the tract and very probably some of them were induced so to return by Colonel Skinner and it is certain that he spent much money upon the villages and greatly improved their condition During the present settlement the old owners who still reside in the villages have sued for rights of occupancy and have I think without any exception obtained them on the ground that they had been dis possessed of their proprietary right and had cultivated continuously since dispossession The Financial Commissioner has upheld these decrees in appeal

568 Present Skinner Management—The present manage ment of the Skinner villages is unsatisfactory in the extreme It is

wholly in the hands of native agents who are frequently changed, and who can neither obtain a knowledge of the villages nor look forward to prolonged service as a reward for honesty The estimates are made with the short chain, which is unfamiliar to the people, they are delayed till the crops have fully ripened, when every day means loss to the cultivator, and all the appraisers are paid servants of the estate The rents, as actually worked, are rack-rents, and the arrangements for their realisation are oppressive This much I have satisfied myself of by personal observation and inquiry from the agents of the estate The people are wretchedly out of heart, and complain bitterly, saying that the estate "takes both ends" It is to be hoped that, now that they no longer have to fear ejectment as a result of any effort to protect themselves, matters will mend But I believe that personal supervision by the owners, which is the only real cure, is not possible under existing arrangements I had hoped, from conversations held with Mr Skinner, that some sort of a sub-settlement might have been effected by consent between him and his tenants, and I am convinced that I could have arranged the matter on terms that would have been advantageous to both parties, but the suggestion came to nothing

569. Karnal Cantonment Lands.—When Karnal was first acquired by us, a considerable area of land close to the town was occupied by the cantonments, and this was added to at various times as military requirements expanded, yearly compensation for the revenue so lost being paid to the Mandals When the cantonment was moved to Ambala, the land was occupied for the purposes of a remount depôt But as much of it was not needed, it was decided to give up the whole, and lease from the owners so much of it as might be required

570. But much capital had been expended in the construction of houses, gardens, and the like, and the properties so formed had changed hands for consideration It was therefore necessary to recognise the interests so acquired In his minute dated 16th February 1852, laying down the principles upon which the revision of settlement of 1852 should be made, the Lieutenant-Governor remarked as follows —

"§ 8 The Government have determined to relinquish the lands of the Karnal cantonments to the proprietors The lands will revert to the *biswahdárs*, between whom and the Mandals the revenue officer must determine a fair jama

"§ 9 All the unoccupied lands will be given up unreservedly to the community of *biswahdars* * * * *

"§ 10 The houses and compounds occupied by individuals should be considered as inferior property (*vide* § 118, directions to

settlement officers) and a fair jama fixed upon them to be paid by the occupants to the *bis ahdars* of which *jama* nine tenths will go to the Mandals and one tenth to the biswahdars

§ 11 If any land is retained by Government as attached to their own buildings this should be entered as *minhai* and if it is of considerable extent a corresponding portion of the payment now made to the Mandals must be continued But if the land retained is of small extent there will probably be no objection to discontinue all further payment and leave the matter thus

571 A careful investigation was therefore made on the lines thus laid down The area retained as Government property was very small and remained unassessed Certain occupied plots were declared the inferior property of the occupiers and the remainder common land of the village In 1855 56 Government declared these inferior properties to be transferable and heritable Some few of the occupiers who could show no sufficient title had been decided to have only a right of occupancy for life and were so recorded In some of these latter cases the village has recovered the land on the death of the occupier in others the heirs are still in possession and have in some cases judicially established their proprietary right

A considerable area of pasture land has been held from that time by Government on a lease at a very moderate rent for the purposes of a breeding stud and latterly of a cattle farm

572 **The City of Karnal** —The city of Karnal is said to have been founded by Raja Karna a General on the side of the Kauravas in the war of the Mahábhárat[1] It is situated on a great bight in the Bangar highland and the old site of the city was some little distance west of its present position It would seem to have been a place of but little importance in early historical times for while Panipat Kaithal and Thanesar are mentioned even by the early Arab geographers and these towns and Samána and Sunpat are commonly referred to by the early historians Karnal is first mentioned towards the end of the Pathan dynasty As a town it owes much of its importance to Rája Gajpat Singh of Jind who built the wall and fort and under whose rule it increased considerably in size Jacquemont describes it in 1831 A D in the following words — In the interior an infamous sink a heap of every sort of uncleanliness Amongst heaps of dung brick rubbish and concourse of beasts are winding paths scarcely passable for horses and having here and there a few miserable huts I have seen nothing so bad in India and it is fair to mention that amongst the natives its filth is proverbial[3] This is very far

572 A S 1 2 0 Ell 62 T G b Karn l

from applying to the present state of the town, which is internally well drained and clean The inhabitants are Játs, Rains, Rors, and the ordinary miscellaneous mixture of Brahmans, Banyas, Musalmans, and menials which always collects in a city In the Sadar Bazar live many Púrbias and Khatíks, &c, who came here with the troops, and used to find employment on the stud lands The breeding stud has been given up for some three or four years, but Government cattle still occupy the lands The population, according to different census, is—

1852	20,178
1868	29,007
1875	23,984
1881	23,133

It is a 2nd-class municipality, and its municipal income for 1879-80 amounted to Rs 18,078

573 The city of Karnal has the very worst possible reputation for unhealthiness, and not undeservedly The canal cuts off a great loop of the Khadir to the west of the city, while to the south lies a great natural bight The drainage of the Bangar runs over the bank, and, held up by the canal and the Grand Trunk Road, forms a huge swamp right under the city, while rice cultivation is carried on up to the very walls When, after the increase of irrigation following upon the famine of 1833, the carrying capacity of the canal was increased to the utmost, the swamps thus formed became pestilential to a degree, and the sickness in cantonments became so great that the troops were moved to Ambala about 1844, and the cantonments finally abandoned In 1844 rice cultivation near the city was prohibited, and remained forbidden for many years, but has since been resumed And canal irrigation was temporarily stopped in the neighbourhood of Karnal on sanitary grounds The raising of the canal banks, so as to stop the canal water itself from inundating the country, has done something to diminish the evil, and the realignment of the canal will no doubt still further reduce it The civil station is protected from malaria by a broad belt of trees growing on the stud lands, and is comparatively healthy

574. The City of Panipat—The city of Panipat is one of the five *pats* or *prasths*, the dispute as to the property in which caused the great war of the Máhábhárat It is built upon a small promontory round which the old bed of the Jamna flows, and the city is well raised on the accumulation of centuries, the old fort in particular commanding the country for a considerable distance The town is embowered in trees, and the white buildings shining through them present a very pleasing appearance as you approach it The city must in old times have been of much greater size than it now is, and Jacquemont describes it as the largest city except Delhi which he

Panipat families

saw in Northern India.[1] Ruins of old shrines extend to a consider able distance round the town and many mosques and shrines and gardens of very considerable pretensions still existing but now in sad disrepair tell of former importance many of the buildings pos sess considerable historical interest An old Indian gun some 8 feet long made of bars of iron bound together by iron hoops and with its name of *ganj shikan* or fort breaker cast on it stood in the fort till after the mutiny when it was destroyed and the gun thrown over the parapet It has lately been moved to Delhi The census popu lation of the town at different times is as follows —

1848	16 870	1868	25 276
1852	22 607	1875	24 463
1881	25 0 2		

The inhabitants are Arabs Rajputs Pathans Bairupias Kayaths and the ordinary city classes It is a municipality of the 3rd class and its municipal income for 1879 80 was Rs 19 09

575 The city of Panipat used to be comparatively healthy till in 185- a cut called the Rer escape was made to drain some swamps at the junction of the Delhi and Hissar canals This cut as isted by the Grand Trunk Road holds up the Bangar drainage in a loop of the Khadir just as the canal does at Karnal till the banks break and pour the water down the Burhi Nadi which would ordinarily carry it off harmlessly but which has silted up to a great degree since the cut stopped the regular flow of drainage on to the city of Panipat The sickness so caused was so great that in 1854 the head quarters of the district were moved from Panipat to Karnal on this ground Rice cultivation was then prohibited in the neighbourhood of the town but the prohibition is no longer in force

576 Panipat Families —The city of Panípat considered as a landed estate is divided into four tarafs or separate estates held by the Rajputs the Ansars the Makhdumzádahs and the Afghans These families are of sufficient importance to demand a brief notice of each

577 The Pánípat Ansaris or helpers of the prophet are des cended from Khwája Abdullah Pír of Hírát one of whose descendants called Khwája Malk Ali was summoned from Hírát by Sultan Ghiás ul dín Balban on account of his repute for learning and settled at Pánípat. They intermarry only with Ansáris Pírzadahs and the Saiyads of Barsat and Sunpat. Many celebrated men have sprung from this family Among the most celebrated are—

(1) Khwája Abdul Rizáq bakhshi in Alamgir's reign

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574 T G i b P n p t

The People of Panipat City

(2) Khwája Muáyin-ul-daula Dilere dil Khan, and his brother Zakaria Khan, sons of (1) and respectively Viceroy of Cabul and Governor of Lahore at the time of Nádir Shah's invasion[1]

(3) Lutfullah Khan Sádik Shams-ul-daula Tahávar Jang, also son of (1), tutor to Azim Shah, warder of the Fort at Delhi during Nadir Shah's invasion, and wazir to Bahádur Shah, Farrukhsír, and Mahomad Shah[2]

(4) Shakirullah Sher Afghan Khan Izzat-ul-daula, also son of (1), subadar of Tatta

(5) Mahomed Ali Khan, grandson of (3), and author of the Taríkh-i-Muzaffari and the Bahrulmawwáj[3]

(6) Abdul Mulk, a celebrated saint, described in the Ain Akbari[4]

578 The Makhdúmzádahs or Muhájarín Arabs are descendants of Abdul Rahmán of Ghazrún, who came to India with Mahmúd of Ghaznavi, settled at Pánípat, and had a descendant, Sheikh Jalál-ul-din Kahi-i-aulia Makhdúm, from whom the family is sprung His shrine has a *ním* tree, the leaves of which are a sovereign remedy against *bhúts*, and no *bhút* ever attacks a Makhdúmzádah They intermarry with Ansárís and Makhdúmzádahs only From this family are sprung—

(1) Nawab Muqarab Khan, Governor of Gujrat in Jahangir's time[1]

(2) Sheikh Hasan, grandfather, and Sheikh Bína, father of (1), very celebrated surgeons[2]

579 The Afghans, or Sherwáni Pathans, descended from Malk Sherwán Khan, who is said to have come to India with Mahmúd Ghaznavi They marry only Pathans

580 The Rajputs, a Túnwar family, said to be descended from Raja Anand Pál of Delhi The hereditary chaudhriship of pargana Pánípat belongs to this family

581. The People of Panipat City—The people of Pánípat are proverbially classed with those of Kasúr and of Jagádhri as bearing not the highest of characters I think that, taken as a whole, they perhaps deserve their reputation They are almost all more or less educated men, they have the misfortune to hold their land revenue free, so that they are never wholly without means, but they are too *sharíf* to cultivate themselves, while the body of landowners has out-

577 [1] S M i, 165 [2] Ell vii, 442, viii, 235 [3] Ell viii, 235, 316, K, 270 [4] A A ii, 223

578 [1] Bl i, 543 [2] Bl i, 543

Chaudhris

grown the capacity of the land to support idle hands in comfort. Of course there are numberless individuals who earn an honest livelihood by service or the like and very many whose character for probity is unblemished for many of whom I have the highest personal respect But there is a very large residuum indeed who have attained the most consummate skill in chicanery and their nearest female relations all of whom are strictly secluded and almost all of whom possess land under the Mahomedan law of inheritance afford them a wide field for its practice without danger which they take advantage of to the full Their law of succession and the tendency to intellectual subtlety which marks the race have rendered their tenures and titles extraordinarily complicated and an 8 anna power of attorney attested by a couple of friends and purporting to empower the holder to dispose fully of the lands and other property of his wife sister or mother is often the basis of very curious proceedings indeed I should add that the above description is far less true of the Rajputs than of the other classes of inhabitants and is especially inapplicable to the Kalhár Rajput who cultivating themselves and being therefore looked down upon by their fellows have generally escaped contamination

petition of great length and

fields of jurisprudence whol

small law library of repealed

Acts in his pocket and who pours out in very high flown language an interminable argument of which the locus is a circle carefully described round the point in dispute is not a pleasant man The other day a Nawab and a Qazi both headmen of the town and entitled to chairs told me without a blush that they had perjured themselves in a former suit before me in order to gain a few rupees and that their statements then made should not be weighed against them in another *claim they were then prosecuting and with which they inconveniently* conflicted

582 Chaudhris.—The two hereditary chaudhris of parganas Karnal and Panipat are Abdul Karim Chauhán of Jundla and Riasat Ali Tunwar of Panipat both Rajputs. There was a Jat chaudhri of Bala for the small group of villages belonging to Jínd but the office dated only from recent times. Both these chaudhris have now been made *zaildars* of their respective *zails* and the income of Panipat *zail* is sufficient But the income of the Jundla *zail* is not half that of many other of the *zails* and I should have much liked to propose an additional grant by way of *inám* Under the Emperors the chaudhri always enjoyed a considerable assignment of revenue as shown by grants now in the possession of the family Till the transfer of the Karnal pargana to the Mandals he used to receive an allowance of 7 per cent on the revenue of the pargana as *nánkár* In 18 0 this was commuted for an annual payment of Rs 300 which the Mandal assignees continued to pay till 1850 when

they objected to continuing the allowance on the ground that a regular settlement had been made The objection was accepted, and the payment ceased I should now propose an *inam* for the *chaudhri*, were it not that the Mandal income has been largely reduced by reduction of assessments,* and I do not wish to increase the measure of reduction in any way that can possibly be avoided But I think the subject should be borne in mind, and some future opportunity taken advantage of if possible

583. **Antiquities** —The objects of antiquarian interest existing in the tract are few in number and of little importance The most curious of them is the old shrine of Sita Mai, at the village of that name in the Nardak It is built in the ordinary form of a Hindu temple, of which Mr Fergusson gives many examples in his Handbook of Indian Architecture It is of brick, but the curious feature is the elaborate ornamentation which covers the whole shrine, the pattern of which is formed by deep lines in the individual bricks which seem to have been made before the bricks were burnt, so that the forms they were to take must have been separately fixed for each brick A large part of the shrine was pulled down and thrown into the tank by some iconoclast Emperor, and though the bricks have been got out and the shrine rebuilt with them, yet they have been put together without any regard to the original pattern The broken finial, part of which has been recovered, is of a curious shape if it was originally made for a Hindu temple, as it is more suggestive of Buddhist symbolism The shrine is said to mark the spot where the earth swallowed up Sita in answer to her appeal for a proof of her purity [1]

584 The shrine of Qalandar Sahib at Panipat possesses two slabs of touchstone of very unusual size It was built by Khizr Khán and Shádi Khán, sons of the Emperor Ala-ul-din Ghori Panipat possesses several buildings dating from early Afghan times, and the Kábul Bágh mosque built by Bábar has already been mentioned—§ 78 *supra*

585 The *minárs* which mark the course of the old Trunk Road are still standing at intervals of about two miles And the ruins of the hostelries (*sarais*) at Gharaunda and Simbhálka are still in existence, the former being a very fine and striking specimen of early Mughal architecture It was built by Khan Firoz in the reign of Sháh Jehán, about 1632 A D The contrast between the huge brick gates which were then necessary for the protection of travellers, and the slight structures which now suffice for the same purpose, speaks volumes as to the state of the country at the respective periods

* When I wrote this, it was understood that the Mandals were not to receive the owners' rates of their villages Since then these have been made over to them, and I think an *inam* might now be granted to the Jundla chaudhri

583 [1] T W ii, 403

586 Weights and Measures —The weights and measures of the tract are divided into *kachha* and *pakka* the latter being the standard measures in which Government returns and records are prepared the former the measures used by the people in their daily life Close to the towns the villagers often use *pakka* weights and measures towards the Rohtak border they always use *pakka* weights and *kachha* measures in the rest of the tract both are always *kachha* But prices are always quoted in *pakka* weights Thus when a villager says his field produces three maunds a bigha and grain is 30 seers per rupee the maund and bigha are *kachha* the seers *pakka*

587 The weights used are as follows the *pakka* weight being always double the *kachha* weight of the same name —

I

5 tolas	=	1 chatank pakka						
0	=	4	=	1 páo pakka				
80	=	16	=	4	=	1 seer pakka		
3 00	=	640	=	160	=	40	=	1 maund pakka = (82 3lb)

II

4 páo kachha	=	1 seer kachha		
160	=	40	=	1 maund kachha = (41 15 lbs)

III

5 seers pakka	=	10 seers kachha	=	1 dl				
10	=	0	=	2	=	1 dha		
60	=	1 0	=	12	=	6	=	1 pánd = (1 3 45 lbs)

This last is the real village measure the weights in it alone not varying from *kachha* to *pakka* *Dhari* is a thing put down (*dharna*) *dhaun* is a thing taken up (*dhauna*) Besides these there are *galua* or as much as can be carried under the arm and *bhar* or as much as can be carried on the head

588 The measures of length are as follows the *kachha* yard being three quarters the length of the *pakka* and being always used by the people —

I

3 Ungl	=	1 g h								
4	=		=	1 muthi						
1	=	4	=	3	=	1 bal t				
24	=	8	=	6	=		=	1 hath		
46	=	12	=	9	=	3	=		=	1 gaz kachha
38	=	16	=	12	=	4	=		=	1 gaz pakka=(33 inches)

II

2 Qadams	=	1 gatha kachha		
20	=	10	=	1 jarib kachha = (31 75 yards)

Weights and Measures

III

3	Gaz pakka	= 1	gatha pakka	
60	,, ,,	= 20	,, ,,	= 1 jarib pakka = (55 yards)

The *ungli* is the finger breadth, the *muthi*, the closed fist, the *balisht*, the span, the *hath*, the cubit, or from the elbow to the finger tips, the *quadam*, the double pace

589. The measures of area are as follows, each *kachha* measure being one-third of the corresponding *pakka* measure, and the people using *kachha* measure generally

Pakka—

20 sq gathas		= 1 biswah	
400 ,, ,,	= 1 sq jarib	= 20 ,,	= 1 bigha = ($\frac{5}{8}$ of an acre)

Kachha—

5 sq gatha =		= 1 biswah	
100 ,, ,,	= 1 sq jarib	= 20 ,,	= 1 bigha = ($\frac{5}{24}$ of an acre)

The *biswah*, whether *kachha* or *pakka*, is of course further sub-divided into *biswánsi*, *tiswansi*, *kachwansi*, &c, each being one-twentieth of the preceding one The measure of area is, as usual, probably derived from a seed measure or *bhi*[1] It is curious that land paying revenue to Government used in old days to be measured with a shorter chain than land of which the revenue was assigned, and we find this short chain perpetuated throughout the Ambala district and much of the Indri pargana, where the owners do not cultivate themselves, and by the Skinners or similar landlords, the chain used being the *súti* or rope chain, which gives a *kachha bígha* of only $\frac{1}{8}$ instead of $\frac{5}{24}$ of an acre[2] This chain is unknown to the villagers of the tract Up till 1826, in which year the Government introduced the *pakka bígha* of 3,025 square yards, the local *bígha* was the present *kachha bígha* of 1,008 square yards, which is approximately one-fifth of an acre

590. There are no real measures of capacity current in the tract, grain and liquids being sold by weight The *map* used to measure grain generally holds either a maund or a maund and a quarter, but this is only approximate, and the contents of any particular measure are always weighed to ascertain the total weight A pinch of anything is called *chugti*, a closed handful, *muthi*, and the contents of the two hands put open side by side, *anjla*

589 [1] N W P ii, 38, 139 [2] N W P ii, 177, 189f

Part II —The Settlement of the Tract

CHAPTER XVII —HISTORY OF THE SETTLEMENT

591 Settlement Notifications —The tract was put under revision of settlement by Panjáb Government Notification No 119 of 29th January 1872 which runs as follows —

A 119 *the 29th ⁷ nuary 187* —*A t fi at n* —Wh reas und sanction f th Go ern General n Co nc l certai port o s f the D lhi d n are to be put u d settl m t the foll w g Notification is ed in acco d nc w th th p isions contained in Secti n 11 A t XXXIII of 1871 (P njáb Land Re enue A t) —

1 —The loc l are wh h s hereby put u de settlement consists of the follow ng p t ons of the unde m t ed distri ts —

f th Karnál d trict—Pánip t nd 162 ll ge of parganah Karnál f rmerly att h d to the Pánipat d stri t f the N th Weste n Pro ince

* * * * * *

2 —Th settl ments w ll be made by the follow ng officers —

(1) M O Wood in cha ge of the s ttlement

*

(2) Mr D Ibbetson Ass st nt Settlement Office f whom—

(1) M W d w ll have ch ef c ntrol of th ettlements f the ent re d s o and be cons de ed the officer ch ge of these settlem nts

* * * * * * * * *

(3) M Ibbet on w ll be reta ed t Delhi r deputed to K ál as the offi e n cha ge may th nk fit nd w *ll r k a A t t Settl me t Offi*

M W od nd M Ibbetson h by e ted w th j d l powe s nder Se tio 21 of A t XIX of 1866 to be e d n the B l bg h pa g h of th Delhi dist ct

3.—The settleme ts th s c d cted will be e ttl m ts nd will comp s —

(1) A re ssessm t f re n
(2) A s n of th c rd of ghts

4 —S n ys and pl s w ll be m de f r the wh l f the tract he by decl red to b under settlement

Settlement Notifications

592. This was afterwards modified by Notification No 815 of 14th June 1872, which, as corrected by an *erratum* dated 12th October 1872, ran thus —

No 815, the 14th June 1872 —In modification of the last portion of para 2 of Panjáb Government Notification, in the Department of Agriculture, Revenue, and Commerce, No 119, dated 29th January 1872, and in continuation of the said Notification, the following Notification is issued by order of His Honour the Lieutenant Governor, in accordance with the provisions of Section 11 of the Panjáb Land Revenue Act (XXXIII of 1871)

* * * * * * * * * * *

Mr Ibbetson, Assistant Settlement Officer, is hereby invested, under Section 21 of Act XIX of 1865, with the powers of an Assistant Commissioner with full powers, to decide suits regarding land or the rent, revenue, or produce of land in the villages of parganah Pánipat (nine in number) now under a regular settlement for the first time, of which a list is appended, and in village Khojgipur, of the Karnál parganah, such powers to be exercised on the revenue and not the civil side of this court

* * * * * * * * * * *

Para 3 of the abovementioned Notification is hereby cancelled, and the following substituted —

The settlements, with the exception of those villages in respect of which judicial powers are hereby conferred, which are under a regular settlement, will be re settlements, and will comprise—

1 —A re assessment of the revenue

2 —A judicial determination of rights in land, and the formation of a record of rights in regard to the villages now under a regular settlement for the first time, and a revision of the record of rights in regard to the remaining villages

KARNAL DISTRICT

Parganah Pánipat

1	Ahmadpur Majra	6	Pánípat
2	Bahauldinpur	7	Nagla
3	Risálú	8	Nurpur Mughlan
4	Sua Kheri	9	Hartarí
5	Saidpura		

Parganah Karnál

Khojgipur

593. The settlement was declared completed by Notification No 1068 of 3rd November 1880, which ran as follows —

In continuation of *Panjáb Government Gazette* Notification No 519 of 11th June 1880, the Hon'ble the Lieutenant Governor, on the report of the Financial Commissioner that settlement operations are complete in that part of the Karnal district placed under settlement by *Panjab Government Gazette* Notification Nos 119 of 29th January 1872 and 815 of 14th June 1872, as amended by *erratum* dated 12th October 1872, is pleased to direct, under Section 17 of Act XXXIII of 1871, that the record of rights recently prepared for the said part of the Karnál district be handed over to the Deputy Commissioner of Karnál

594 Officers and their Powers —Mr Wood was in charge of the settlement from the beginning till the 12th March 1873 I being his Assistant From that date I was formally put in charge of the settlement as Assistant Settlement Officer but still remained under the direction and superintendence of Mr Wood my powers and du ties being in no way altered On the 19th December 1875 the set tlement was removed from Mr Wood s superintendence and I was brought in immediate subordination to the Commissioner and held charge on this footing till the completion of operations Gobind Sahai was appointed Extra Assistant Settlement Officer in May 1876

The annexed table shows the Superintendents and Deputy Su perintendents who have assisted me in the Settlement —

Karnál and Pánipat—

SUPERINTENDENT	Gob d Sahai f om beginning to 28th J n 1875
DEPUTY SUPERINTENDENT	Rám Náth 14th Feb 1875

Karnál—

SUPERINTENDENT	K dar Náth fr m 29th Jan 1875 to 19th Feb 1877 Khád m H se f on 20th F b 1877 t e d
DEPUTY SUPERINTENDENT	R m Náth f om 15th Feb 1875 to 12th Feb 1878 Thák r Dá 13th 1878 12th J 1880
	K p Rám 1st J ne 1875 16th Jun 1878 B d l dín 17th 1878 e d

Pánipat—

SUPERINTENDENT	C b d S h i f o 29th J n 1875 to 9th May 1876 Khád m H sen 3 th M y 1876 19th Feb 1877 Kidá Náth 20th Feb 1877 t end
DEPUTY SUPERINTENDENTS	Ahm d Bakhsh f om 15th 1875 to end
	H mid l dín from 1st J e 1875 to 19th Aug 1875 Beli Rám th A gu t 1875 to e d
	L chmi Náraın from 1st June 1877 to 28th Sept 1879 H rbhaj Rai 29th Sept 1879 t d
	Gopál S h i 16th Jan 1878 to 26th Feb 1879 Thák Dás 13th 1880 e d

The judicial powers conferred in connection with the settlement and the Notifications conferring them are shown in the annexed table I have classified the cases for shortness class A comprising all cases regarding land or the rent revenue or produce of land situated in the nine villages of parganah Pánipat and one village of parganah Karnál coming under settlement for the first time and enumerated in Notifica tion No 815 of 14th June 187 quoted above and class B comprising all cases under the Panjáb Tenancy Act

Officers and their Powers

Table of Judicial Powers conferred on the Officers of the Karnál Settlement

Name of Officer	Notification of Panjab Government		Act and Section under which powers were conferred	Extent of powers conferred	Class of cases in which powers were to be exercised	Localities to which the powers were confined
	No	Date				
Financial Commissioner	815	14 6-'72	22, XIX, 1865	Powers to try special appeals and as a court of final appeal	A and B	The tract under settlement
	284	23 2 '75	22, XIX, 1865	Powers of Chief Court to try special appeals and as a court of final appeal	A and B in decisions passed by any Tahsildár, Assistant Commissioner or Deputy Commissioner in the Karnal District	Ditto
Commissioner	815	14 6 '72	21, XIX, 1865	Powers to hear appeals	A	Ditto
Mr Wood	815	14 6 '72	21, XIX, 1865	Powers of a Deputy Commissioner to decide suits or appeals	A	Ditto
	1676	28 11-'72	21, XIX, 1865	Ditto ditto	B	Ditto
Mr Ibbetson	815	14 6 '72	21, XIX, 1865	Powers of an Assistant Commissioner with full powers to decide suits	A	Ditto
	1676	28 11-'72	21, XIX, 1865	Ditto ditto	B	Ditto
	1204½	13 10 '73	21, XIX, 1865	Powers of a Deputy Commissioner to try suits and appeals	A and B	Ditto
Gobind Sahai	1676	28 11 '72	21, XIX, 1865	Powers of a Tahsildar to try suits	B	Parganah Pánipat
	105	21 1-'73	21, XIX, 1865	Ditto ditto	B	,, Karnal
	444	6 4 '76	21, XIX, 1865	Powers of an Assistant Commissioner with special powers	A and B	The tract under settlement
	605	24-5 '77	21, XIX, 1865	Powers of an Assistant Commissioner with full powers	A and B	Ditto
Kidár Náth	698	20 5 '75	21, XIX, 1865	Powers of a Tahsildár	A and B	Parganah Karnal
Khadim Husen	820	5 7 '76	21, XIX, 1865	Ditto ditto	A and B	Ditto Panipat

Progress of the Survey and Record of Rights

All these powers were to be exercised on the revenue and not on the civil side of the respective courts Moreover Notification No 284 of 23rd February 1875 directed all Tahsildars Assistant Commissioners and Deputy Commissioners in the Karnal district to exercise their respective powers in suits falling under the two classes already mentioned and arising in the part of the district under settlement on that side of their courts

Notification No 519 of 11th June 1880 after cancelling the abovementioned Notifications continued as follows —

7I th June 88o —U der Sect on 49 of Act XVII f 1877 th H n bl th L t nt Go e o s ple ed to d ect th t th j sdict o he by w thd n b r c d h ncefo th sol ly by th ı l c t by h h s ch ju sd t n w ld h b n e e ed had the p ts of th f d N t fi t h by c nc lled t b en p bl h d P o ded th t y as now p d g b f y ffi d r ny of th said N t fi tions h ll b d p d f by h m f th p e e t Not fic t n h d n t b n ss ed

Finally Notification No 1204½ of 13th September 1873 invested me with powers under the Panjab Land Revenue Act in regard to the appointment punishment and removal of patwáris and the appointment fine and removal of district qanungos and naib qanungos

595 Progress of the Survey and Record of Rights —I reached Karnal at the beginning of February 187 my staff joined at the end of the month and the patwáris were made over to me a fortnight later The settlement was finally completed on the 5th of October 1880 thus the time taken over it has been inordinately long But I think that this fact may be in a great measure accounted for No sooner was the settlement begun than the Government of India ordered that of all the settlement fees which used to be collected so freely in former settlements none should in future be levied except those authorised under the Land Revenue Act The estimates had been framed before these orders were passed and no provision had been made to take the place of the income thus cut off Moreover the experiment was tried for the first time I believe in these settlements of giving the Settlement Officers very limited judicial powers and leaving the mass of the litigation to be decided as usual by the district courts and I think the degree of relief which this plan was to afford to the settlement staff was overestimated Finally the tract under settlement in Karnál had the misfortune to be only a tahsil and a half The result was that the settlement was terribly under handed We had it is true only 336 villages to settle but they included 570615 acres of which 258 192 were cultivated which were split up into 1 ,68 461 plots to be separately entered in the field registers and were divided into 89 445 separate holdings all requiring separate attestation and record The patwaris staff numbered 111 while I had only one Superintendent one Deputy Superintendent seven munsarims and 13 naib munsarims to supervise the whole For

Progress of the Survey and Record of Rights.

the same establishment the proportional areas in the Delhi division were as follows —

Delhi district	272,606 acres
Gurgaon ,,	253,167 ,,
Karnal ,,	570,615 ,,

Thus I had not half the staff relative to area that was employed in the other districts The fact that the villages were few in proportion to the area, and therefore large, greatly increased the difficulty of survey It was not till February 1875 that I obtained another Superintendent and Deputy Superintendent, two more munsarims, and four more naibs And it was not till April 1876 that an Extra Assistant Settlement Officer was sanctioned The delay in the earlier operations which was caused by the lack of supervising establishment was exceedingly great, as will presently be pointed out

596 But this was not the only, or perhaps the principal cause of delay I should hardly exaggerate if I said that the two first years were spent in teaching the patwárís to survey From the very beginning the training of the patwárís was set before me as one of our principal aims, and I received the strictest orders that no one but *bonâ fide* patwárís were to have a hand in the settlement work, that no assistants or substitutes could be allowed, and that no proposals for their employment could be listened to I was warned against the danger of their being entertained *sub rosâ*, and told that any Superintendent or other officer who permitted such a practice would be at once suspended I was instructed that every patwárí *must* be so trained as to be "thoroughly competent to undertake and complete unaided the survey of a large village, both preparing the map and writing the field register," as a *sine quâ non* of his continuance in office, those who were unable to reach this standard being weeded out Thus, till the beginning of 1875, when I obtained verbal permission to employ assistants when absolutely necessary to carry on the survey, no single person other than a patwari was allowed to take any part in settlement operations The tract under settlement being small, I can confidently vouch for this fact

597 Out of the 111 patwárís with whom I started work, only two knew anything of survey, 21 could not read or write Persian, and 25 were utterly incompetent It was hard to turn off men who were otherwise fully equal to their ordinary duties, merely because they had not skill which had never before been demanded of them Some of the most efficient patwárís, and of those who had the longest service, were apparently too old to learn survey, and I was loth to dismiss them Thus every effort was made to give each man a full chance of learning, and only after long and tedious trial was a man, otherwise competent, turned off as unable to survey Moreover, up to the end of 1874 we were not allowed to employ the patwárís otherwise than

Progress of the Survey and Record of Rights

in pairs so that only half could be trained in survey at the same time Thus when a man had been taught to map well much of his time was taken up in teaching his partner who was only learning and who was painfully surveying while the other was writing the regist r

But even where there was no hesitation about dismissing a useless man it was for a long time impossible to replace him for I had no sufficient pay to offer as an inducement The patwárís pay averaged Rs 8 8 a month but was often less than Rs 7 while I was not allowed till early in 1874 to equalise the pay by taking from the better paid circles to give to the worse Proposals for increase of pay were submitted in June 1872 but sanction was not received till June 1873 and then owing to a misunderstanding only a comparatively small increase was sanctioned not amounting to half what I had asked for while no further increase was sanctioned till the end of 1876 The consequence was that men could not be induced to accept the vacant appointments or having accepted to retain them Circles remained vacant for months and at the end of the first two years of 144 new patwaris appointed by me at various times only 50 remained with me while 54 of the old patwárís had been dismissed And even when I was able to offer fair pay the difficulty was not removed for the post of patwárí is not held in esteem in these parts and scores of competent men who would willingly have served me as *amíns* would not come for the same pay as patwárís Thus we struggled on with a staff of patwárís learning their work under a wholly insufficient supervising establishment and with a scale of pay so small that punishment was difficult and replacement often impossible The supervision was necessarily imperfect for it was impossible for one Superintendent and one Deputy Superintendent to attest the preliminary statements of rights and genealogical trees carry on the routine work and at the same time properly superintend the survey and much of the work had to be condemned and done over again when tested

598 Besides the settlement work proper a yearly examination not only of the riverain villages but also of the whole of the *seh* affected tract which alone included 187984 acres and 4 8027 fields had to be made and papers to be drawn up and the patwarís had to perform their district duties as usual with the exception of preparing the yearly papers no substitutes being sanctioned The delay caused by the patwárís being constantly called off for district work has been great throughout and was for the first two or three years intolerable At first the average time thus taken up was 70 working days in the year for each man in the third year this had fallen to 36 and in the fourth year to 18 days

599 Thus at the beginning of 1875 only half the tract had been surveyed and not one half of the area so surveyed had been finally examined and passed But by this time the patwarís had passed through their educational stage the permission to appoint

Progress of the Survey and Record of Rights

assistants, when absolutely necessary, was taken advantage of with respect to some of the oldest and best men who had been kept on, hoping, against hope, that they might learn to survey, the survey of the remaining half of the district was completed early in 1876, and the measurements were all tested and passed by the middle of the same year

599a Till the beginning of 1875 I had been under the impression that the orders about patwáris required that *all* the settlement work should be performed by them exclusively I was then for the first time given to understand that an additional staff of writers might be employed for purposes of check, compilation of statistics, and fairing The funds for this extra establishment were at first difficult to obtain, as it was understood, till 1876, that parchah fees were to be levied on proprietary and not on cultivating holdings But latterly advances from settlement fees provided funds from which extra establishment was paid and stationery purchased During 1875 a small staff was employed in compiling statistics from the district records As the survey drew near completion, the process of checking was rapidly pushed on, and by the end of 1876, within six months of the final passing of the measurements, the assessment returns were practically complete

600. Meanwhile the papers were being prepared for final attestation, which began towards the end of 1876, and extended over two years By the 30th June 1880 the Government and patwárís' copies of the records, the canal records, and the extracts of rights and holdings, were completed for all but the two cities, and the work was finally completed three months later The delays caused by the annual fever epidemic, which attacks Karnál in particular, and especially by that of 1875, by the heavy rains which flooded the canal villages while we were surveying them, by the droughts which drove away the owners whom we wanted to attest our records, by periodical calls for survey of land taken up for, on the whole, some 100 miles of canals and channels after our survey was over, and the alterations in our papers thus necessitated, and by the field-to-field examination of all the Nardak villages and the preparation of statements for remissions and suspensions of demand in each harvest for four successive years of drought, were more serious than might be thought possible without experience of them The bháyáchára tenure on which almost all the villages were held, and the enormous size of some, and large size of most of them, very greatly increased the complexity and difficulty of the operations And, finally, the trouble caused by Superintendent Kidár Náth's lengthened illness and incompetence, and by the necessity of doing over again much of the testing work that had been done under him, was very great The statement on the next page shows the establishment as it stood at the end of each year, while the whole cost of the settlement is given in §604

Progress of the survey and record of rights

Establishment of Karnál Settlement

	Staff	1872-73 Number	1872-73 Monthly pay	1873-74 Number	1873-74 Monthly pay	1874-75 Number	1874-75 Monthly pay	1875-76 Number	1875-76 Monthly pay	1876-77 Number	1876-77 Monthly pay	1877-78 Number	1877-78 Monthly pay	1878-79 Number	1878-79 Monthly pay	1879-80 Number	1879-80 Monthly pay
			Rs.		Rs		Rs		Rs		Rs.		Rs		Rs		Rs
[illegible]	Extra Assistant Settlement Officer							1	300	1	300	1	300	1	300	1	300
	Superintendent	1	250	1	250	2	450	2	400	2	400	2	400	2	400	2	400
	Deputy Superintendents	1	60	1	60	2	140	4	20	4	220	7	32	6	300	6	300
	Munsarim	7	210	7	210	9	270	7	10	7	210	7	10	7	210	7	210
	Naib Munsarims	13	260	13	260	17	340	15	300	15	300	1	00	11	~20	11	0
	Clerks	8	1 0	8	170	12	275	17	385	17	385	17	385	17	385	17	385
[illegible]	Deputy Superintendents									2	80						
	Munsarim							2	65	1	3	1	30	2	50		
	Naib munsarims and officers							1	20	3	60	25	449	17	307	29	507
	Writers							77	1 166	84	1 099	80	1 067	110	1 487	250	904
	Patwaris	111	991	111	1 525	111	1 525	111	1 546	111	1 434	111	1 446	111	1 46	111	1 448
	TOTAL	141	1 941	141	2 475	153	2 980	237	4 612	247	4 518	61	4 807	83	5 1 1	434	6 674

Personal work of Settlement Officer

601 Personal work of Settlement Officer—There appears to have been, at the beginning of settlement operations, a misconception about the position which I was to occupy I was appointed as assistant to Mr Wood, to be stationed at Karnál or Delhi as he might determine, and I was allowed no English clerk, and only Rs 115 a month for office establishment In fact, it was intended that I should have no independent correspondence But in reality I was practically in separate charge of the Karnál settlement, subject, of course, to Mr Wood's supervision, from the very beginning, and the Commissioner at once directed that all correspondence should be conducted in English In the beginning of 1875 Rs 50 was sanctioned for an English clerk, but the pay was quite insufficient to secure a competent man for what was looked upon as very temporary employment, and two appointments on trial only resulted in my English office getting into hopeless confusion Consequently I have, for everything except mere copying, been my own head-clerk throughout, even keeping my own registers till quite lately The amount of petty labour thus entailed upon me has been very great My original vernacular office establishment, though quite inadequate, was never increased

602 The assessment returns were ready in the beginning of 1877, my assessment report for Pánípat was submitted on 3rd June 1877, and that for Karnál on 14th February 1878, the detailed assessment of Pánípat having meanwhile been prepared in the rough Orders were received on the Pánípat Report in November 1878, calling for a further report on the canal tract, the detailed assessments of the Khádir were announced on 14th December 1878, the further report was submitted in January 1879, and the Bángar assessments announced in anticipation of final orders on 20th of February 1879 The Financial Commissioner's orders on the Karnál Report were received at the end of June 1879, but Government orders were delayed, and at the end of September power was obtained to announce the detailed assessments in anticipation of them, which was done for the whole tahsil on 10th October 1879 In the cold weather of 1879-80, I was employed for three months on special duty in connection with the re-settlement of Kaithal and Thanesar Finally, orders on the subject of the patwárí cess, till receipt of which I could not complete the record of any single village, reached me on the 20th May 1880

603 I think I have shown some reason for the long time which the settlement has taken, for the fact that there were only two tahsíls under settlement only reduced the labour of the Settlement Officer, and did not affect the time necessary for the settlement of each single tahsíl But I do not for a moment wish to imply that I am free from blame in the matter I am only too painfully conscious of the many mistakes I have made, of the time that has been spent in straining

Cost of the Settlement

after great accuracy in the earlier stages of work that had after all to be gone over again and checked in the final stages of many at tempts to secure a greater degree of accuracy than is possible in papers prepared by the agency at our disposal at a cost that was too great in proportion to the advantages it purchased and of many en deavours to personally supervise and control details which tool up much time that might have been better employed But I had when ap pointed only been a year in the country had never seen a settlement and had not the faintest conception of the enormous labour involved in the complex processes of attestation checl and comparison or of the time which the mere mechanical operation of copying would consume In fact I had to feel my way as I went on with no general idea of the amount of work to be done to guide me And above all the absence of any sufficient supervising staff in the earlier years of the settlement forced me to take upon myself a large share of the routine worl of the settlement of which I afterwards found it difficult to divest myself I can at any rate say with truth that I have never at any time spared myself or my labour that all the operations which fell upon me per sonally as Settlement Officer have been performed with the most anxious care and that the people have felt throughout that any and *every complaint or petition was sure to meet with an op n ear and a* patient investigation from me

603a Cases decided —*The following figures show the number* of cases decided during the settlement operations —

Offi e d d g	*J d l S t*	*R C*
S ttl m nt Officer	407	8 674
E t \ s t t S O	5 7	4 6
Two S p t d nts	414	7 7 3
T t l	*1 348*	*18 793*

604. Cost of the Settlement —The figures given on the next page *show the money which passed through my hands during the* progress of the settlement It amounts in all to Rs 5 54 10- But more than a third of this amount was the pay of the ordinary patwari staff the greater part of which would have been collected and disburs ed even had there been no settlement Excluding this money the ex penditure was Rs 3 63 651 As a set off against this fees to the amount of Rs 64 274 were collected while a sum of Rs 39 040 was recovered from assignees of land revenue as their share of the expenses The net co t of the settlement to Government was Rs 61 30 an amount which is unduly enhanced by the pay and allowances of gazetted offi cers as the smallness of the tract under settlement caused these items to bear an excessively *high proportion to the total expenditure*

Cost of the Settlement

Expenditure of Karnál Settlement, in Rupees

Year	Imperial	Settlement fees	Patwáris' pay	Total
	Rs	Rs	Rs	Rs
1871 72	5,066			5,066
1872 73	25,204		12,865	38,069
1873 74	26,160		12,973	39,133
1874 75	26,910		20,043	46,953
1875-76	34,520	6,723	19,286	60,529
1876 77	41,167	12,227	15,970	69,364
1877-78	43,077	17,722	28,035	88,834
1878 79	44,385	13,140	23,189	80,714
1879 80	46,650	4,752	43,469	94,871
1880 81	15,942	6	14,621	30,569
Total	3,09,081	54,570	1,90,451	5,54,102

RECEIPTS

	Rs
Court fees	7,875
Process fees	2,037
Settlement fees	54,362
Patwáris' pay	1,89,558
Recoveries from assignees of revenue	39,040
Total	2,92,872
Net cost	2,61,230
	5,54,102

DETAIL OF IMPERIAL EXPENDITURE

	Rs
Gazetted officers' pay	1,03,141
,, travelling allowance	9,145
Fixed establishment's pay	1,36,036
Temporary ,, ,,	6,644
Travelling allowance of establishment	6,511
Tour charges	3,958
Tents	2,155
Surveying instruments	1,963
Stationery	22,327
Printing	4,163
Postage	4,465
Office rent	1,501
Miscellaneous contingencies	7,072
Total	3,09,081

Adjustment of Boundaries

CHAPTER XVIII —THE RECORD OF RIGHTS

605 The Record —The settlement record consists of the following papers in the order given those not needed in any village being of course omitted from its record Certain alterations in the prescribed forms were sanctioned by the Financial Commissioner in correspondence ending with his No 6058 of 10th October 18/6 —

1	F eld m p	8	Alph bet c l l t f wells
2	F ld reg t r	9	
3	Inde of old d n wn mbe s		
4	G lo~cal t e	10	
5	Alph bet al l st f w e		
6	t a t	11	E g g m t f th en
7	R g t r of ht nd h ld gs with ppend ce	12	Adm t at p p
		13	F l p o eed g

Besides the record proper boundary maps and files a record of tribal customs and registers of revenue free holdings and assignments have been prepared The principal papers are mentioned below in their places In parts of the city of Panípat an appendix to the record of rights and holdings has been added showing in detail the payers receivers and amounts of the *haqq taqbah haqq istamrat* and *haqq áb* mentioned in Section 26_ the land liable to and free from these dues having been detailed in the *khewat* opposite each holding but there having been no room there for further particulars

606 Adjustment of Boundaries —The adjustment of boundaries was made by Saidar Yar Mahomed before settlement operations commenced The maps prepared by him were quite useless for purposes of field survey and all the boundaries had to be mapped again while in very many cases they were incorrectly shown in the boundary maps and had to be altered during the progress of settlement Wherever there was a dispute and the boundary maps agreed with one another the latter were taken as finally decisive But in some cases the two maps of the same boundary did not agree and a decision was necessary while in others the actual boundary as acted upon and agreed to by both villages and as clearly defined by the cultivation of the parties differed from that shown in the maps The boundaries on the Jínd border too were disputed by that State and were finally adjusted by me in accordance with the orders of Govern

ment, and sanctioned in Government, Panjáb, No 1347 of 15th July 1875 A good many decrees for alteration of boundaries were obtained, and these were acted upon as long as the progress of my work would permit, for though the decrees, as worded, were simple waste paper, the village area being a purely administrative unit, and quite beyond the control of the courts, yet the judgments really affirmed the right to the land in question, and it would have been most inconvenient to have had part of the common land of one village included in the area of the next, where it could possibly be avoided

607. All alterations thus made in the boundaries were communicated to the Revenue Survey Department, who re-surveyed most of the alterations But the district copies of the survey maps had been prepared long before the re-survey I have had a detailed map and register of all the alterations filed with the original boundary files in each case The settlement field maps must, in any case, be the ultimate guide in all cases that are likely to be disputed in future, for the lines proposed by the respective parties generally vary so slightly that the revenue survey maps, drawn to a comparatively small scale and showing no fields, are of no great use as guides In one case, that of Begampur-Dadláná, I separated, with the sanction of the Commissioner, the joint village into two distinct villages, each containing one estate, without any partition or re-distribution of lands being necessary, and complete partition was effected between the Skinners and the Gújar owners of Kábrí and Nohrá, the four villages of Kábrí, Nohrá, Sikandarpur, and Faridpur being created Thus the number of villages has been increased by three, and the number of estates by two during settlement

608 The Field Maps—All the settlement field maps have been drawn to the scale of 16 inches to the mile, and wherever the plots were too small to be shown on this scale, they have been given on the margin to a scale of 64 inches This has almost always been necessary with the small holdings round the skirts of the homestead, occupied by fuel stacks, dunghills, and the like, and called *kúri bitore* These have all been carefully entered in the record, but the homestead itself has been surveyed as a single block, and its interior details excluded from the record of rights, in accordance with the instructions of the Financial Commissioner The enlarged scale has also been very often necessitated by the minute plots into which rice lands are sub-divided, fields of less than one-sixteenth of an acre being by no means uncommon The total number of fields entered in the maps has been 910,356, and the addition of corners makes a total of 1,268,461 separate entries in the field register At last settlement the total number of fields was 393,682

Comparison of Settlement and Professional Areas

The boundary traverse was based upon a sort of interior triangulation defined by flags fixed to the highest trees in the area I believe the survey to have been made with great accuracy It has been severely tested by the new canal distributaries the straight boundaries of which have been laid down on the completed maps by joining their points of intersection with the sides of the field they traversed and the maps have stood the test well And the revenue surveyor after a most careful and elaborate personal comparison of his maps with mine recorded the result of his testing in the words quoted in the next paragraph As the various villages had been surveyed in different seasons some of them so abnormally wet that the swamps had been unduly exaggerated while river action had of course taken place yearly and as I considered it of importance that the whole of the survey records should be brought up in these respects to the same year I had all the riverain villages and those parts affected by swamp and *reh* revised in the cold weather of 1875 /6 which had been preceded by an average season and the records brought up to correspond with the existing state of affairs Unfortunately I was for some time ordered not withstanding my protests to make my field maps on paper which *quite failed to stand the wear and tear of subsequent office use* and many of the original field maps though mounted on cloth and patched up as far as possible have become practically useless They were carefully copied on tracing cloth at an early stage and these copies have been filed with the final records cultivation culturable and barren from *reh* from swamp and from other causes roads watercuts &c being distinguished by different colours Tracing cloth however is not a good material as the paint and ink crack off at the folds Copies for the patwaris have been made on common white cotton cloth—a most admirable plan as the maps stand even the roughest *treatment without injury*

609 Comparison of Settlement and Professional Areas — The detailed settlement areas varied so largely from those obtained by the revenue survey that an elaborate comparison was instituted by Captain Wilkins of the Survey Department who returned to the district for the purpose compared the two sets of maps re calculated all his areas and re surveyed some doubtful cases In his memorandum on the comparison he wrote as follows — The agreement of the settlement field maps with the professional maps is marvellously good In most villages every bend and turn agrees and the agreement is as good as might have been expected if the two surveys had been carried on *pari passu* instead of there having three or four years between them

610 The total area compared as follows excluding the villages on the river bank in which the revenue surveyor had continued his

Comparison of Settlement and Professional Areas

boundaries up to an imaginary line in the centre of the river-bed, while we measured only up to the waters' edge

Percentage of error on total area	Number of villages		
	Karnál	Pánípat	Total
Less than a half	36	38	74
A half to one	29	26	55
One to one and a half	24	16	40
One and a half to two	12	23	35
Two to three	31	25	56
Three to four	7	11	18
Four to five	4	4	8
	143	153	296

Considering the rough method of survey adopted in the settlement, and that the areas are obtained by adding together the areas of many thousands of minute plots, in each of which small fractions are neglected, these results appear to me satisfactory

611 The comparison of the detailed areas was less satisfactory In the Karnál tahsil comparison was impossible, as when this tahsíl was surveyed no settlement operations were contemplated, and the Panjáb Government instructed the Survey Department to confine its operations to "the mapping of the demarcated boundaries, and of the principal topographical features of the village area, no minute interior survey being required" For tahsil Pánípat the figures are as follows —

Percentage of error on cultivated area	Number of Villages		
	Canal	Khadir	Total
0 to 1	16	21	37
1 ,, 2	12	8	20
2 ,, 3	9	4	13
3 ,, 4	8	10	18
4 ,, 5	10	4	14
5 ,, 7½	11	8	19
7½ ,, 10	5	5	10
10 ,, 20	15	3	18
20 ,, 30	1	1	2
30 ,, 40	2		2
	89	64	153

It must be remembered that an interval of three to five years had elapsed between the two surveys during which land had of course been broken up or abandoned while in the Khádir villages there are many sandy tracts which are only cultivated in exceptional seasons Moreover the professional areas for roads canal cuts and the like are *estimated* not surveyed as ours are and were generally under estimated And the professional areas are wholly based upon the signs used in the maps so that the omission of a sign throws the areas out many discrepancies were shown to be due to this cause The maps of each village were carefully compared and where neces sary the land was examined on the spot I submitted a detailed report which accounted satisfactorily for each case in the Khádir vil lages several of those in which the discrepancies bore the largest pro portion to the whole area being mere plots of a few acres in all In some of the canal villages the differences are very large and here they are due to the revenue surveyors having included as cultivation all or almost all land which was divided off into fields thus showing as cultivated the very large area of old cultivation which had been for years thrown out of cultivation by *reh* or swamp and which was of course shown by us as barren or culturable The differences too in the areas of canal cuts are very large and these almost always run through cultivation while the spoil banks due to the annual silt clear ance often take up much land which the professional estimated area allowed nothing for But the comparison of the maps showed that in every case the difference was one of *classification* merely and not of computation or survey the edges of cultivation as shown in the pro fessional maps being clearly marked in our maps as the edges of old cultivation though including much that we recorded as now uncultı vated I know from personal acquaintance with most of the localities and careful supervision of the revision of *reh* entries described in the last section that the professional classification of cultivated and uncultı vated land where it differed from ours was wrong and this is not to be wondered at for it is often exceedingly difficult to say by mere inspection for how long *reh* stricken or swampy fields have been aban doned

612 The Field Register—The field register shows the kinds of cultivated soil classified as follows —

(*a*) Gorah manured unmanured

(*b*) Canal tor canal dál watered from brick wells watered from temporary wells watered from tanks streams &c naturally moist dry

(*c*) *Dákar rausli bhur*

The distinction between Gorah and manured, for which I am not responsible, is, I think, unnecessary, and every additional sub-division increases enormously the complexity of the subsequent processes. I am not sure whether it is wise to retain even the distinction between manured and unmanured in the final record, though the areas must be ascertained for use in assessment. The classification was in many cases very difficult. It is often impossible to say whether a given field is *rausli* or *bhúr*, and still more difficult to decide whether a given plot, which is slightly affected by *reh*, is barren or culturable. And, as I believed uniformity in classification to be the most important point, and that interference in details in the very insignificant proportion of cases in which it was possible for me personally to interfere, would simply destroy all uniformity, I made it an almost absolute rule never to interfere other than generally in this matter. But I took care to ascertain the standard of classification adopted, and my elaborate notes made on the spot with a rough map in my hand, enabled me, when assessing, readily to allow for errors of judgment in this respect. In fact *rausli* differs so enormously in quality, that to assess merely on the recorded area of that class of soil would have been impossible. All land ordinarily irrigated from the canal was entered as so irrigated, without reference to the question whether canal water had or had not been taken in the year of measurement, the actual irrigation figures being obtained from the Canal Department for use in assessment. Similarly, all land ordinarily irrigated from a well was entered as well-irrigated, the area which the well could irrigate in any one year being carefully estimated by the munsarims, checked by the superior officers, and recorded in the well statement, and the depths of and to the water being measured and entered as a further check for assessment purposes. Land irrigable from a well, but watered from the canal, was entered as canal-irrigated, as otherwise it would have been exempt from owners' rates under the Act, while it would have paid no more than dry land under the system of distribution of revenue adopted by the people. All land rendered barren by *reh* or swamp was separately recorded, so that an inquiry into the progress of these evils can be made at any time.

The areas have been calculated by heights of triangles, and not on the old system of average lengths of opposite sides. The new method was easily taught to the surveyors and computers, and the increase in accuracy is very considerable.

613 Preliminary Attestation.—The patwáris' annual papers were found to be so incomplete and incorrect that they were quite useless as a preliminary record of holdings, and a proposal to survey without that paper was not sanctioned. Accordingly, as it became necessary to attest each holding, I determined to do so with great

thoroughness in order to facilitate the final attestation and the preliminary attestation was for the greater part of the tract made with as much care and completeness as the final attestation itself This turned out to be a great mistake The first attestation was based upon the old the final attestation upon the new survey so that each holding had necessarily to be gone over again field by field Moreover it was ruled that the decisions passed and statements recorded at preliminary attestation were not binding at final attestation Thus though some labour was undoubtedly saved at final attestation by the disputes having been thoroughly gone into before hand yet this saving was not nearly equivalent to the extra labour entailed in the first instance Above all as the preliminary attestation was made when I had no establishment whatever except my actual staff of patwáris the delay caused by it was great

614 The Final Attestation —The final attestation was conducted in the following manner —*The* tract was divided into circles one for each Deputy Superintendent Each Deputy Superintendent with his establishment fixed his head quarters at first one large village and then another attesting from each centre all the villages lying so near tha

evening

sharer in

ed attorney In the cases where sharers were living at a distance and did not appear the holding went to the Superintendent who after service of notice on the absentee attested it as a disputed case This rule had necessarily to be relaxed in the Nardal where owing to the drought many of the younger men had gone away with the cattle or *in search of work But even there care was taken* that ome near relation of mature years was present in behalf of the absentee

I and my Superintendent were constantly moving about from one Deputy Superintendent to another and I believe that the attestation was very thoroughly done I have had numberless files before me on petition and have comparatively seldom had to find fault with the proceedings We anticipated considerable trouble from the provisions of § 19 of the Land Revenue Act which generally forbids us to alter any entry in the old records without consent as at last settlement the head of the family was very generally recorded as owner and the younger members left out But in most cases the people agreed to the entry of the whole of the sharers without demur and even when altogether the wrong owner had been entered he or his heirs very generally consented to an alteration when confronted by the assembled brotherhood The last settlement record of the old Panipat tahsíl was with the above exception very fairly accurate But that of the Mandal tract

was *exceedingly* incorrect, as plainly stated by the Settlement Officer himself at the time, and in this part of the work great trouble was experienced The mere fact that the number of fields has increased *from 393,682 to 910,356, the number of proprietary holdings from 18,760* to 21,444, and the number of cultivating holdings from 33,909 to 89,445 since last settlement, shows the laborious nature of the task The patwáris' papers were, as a rule, quite useless, being often little more than copies made from year to year, subject to such alterations as had been formally sanctioned, or pressed upon the patwáris' attention by the parties In an immense number of cases of inheritance the death had never been reported, nor mutation of names effected The attestation of the city of Pánípat in especial gave us trouble beyond belief Not only were the tenures of an unusually complicated description, and the people of the most litigious character, but the latter never dreamed of obeying an order or attending upon an official till they were forced, while the native officials seemed afraid or unwilling to compel obedience It is impossible to describe the delays and difficulties which have attended the process The papers of the summary settlement were incomplete and almost entirely useless as records of rights, and the present record is the result of as much labour as would have sufficed to prepare the record of seven or eight ordinary villages of the same size

615 Adjustment of Rights and Rents of Tenants.—The attestation of the general status of tenants, whether with rights of occupancy or tenants-at-will, was, of course, merely a part of the general attestation But we were directed by Government to classify the occupancy tenants according as they held their rights under the various sections of the Tenancy Act, and so far as the facts were undisputed The people did not attach much importance to the classification, and the material facts were, as a rule, either admitted, or recorded in the file of the suit in which the status had been declared The classification is given in the administration paper When facts which would have affected the classification were disputed, the entry is simply "disputed"

616 The rents paid by the tenants at the time of attestation were ascertained with little difficulty or dispute, the vast mass of the tenants paying revenue only, and in some of the villages in which true rent is taken, the tenants-at-will being allowed or even induced to attest lower rents than they actually paid, with the idea of influencing the assessment *But we were directed to re-attest the rents of the* occupancy tenants after the announcement of the new assessment, and to enter the new and not the old rents in the record In doing this we had a good deal of trouble Where the revenue had been enhanced, and even in very many villages where a reduction had been given, the owners allowed their occupancy tenants to pay revenue only as

before But in a good many villages where the demand had been reduced whether actually in order to relieve the village or nominally by deduction of owners rates the owners refused to allow the tenants to take advantage of the reduction which the tenants claimed to do As I had no power to decide the dispute summarily I directed that in disputed cases the actual amount paid by the tenant on account of the land for the year immediately preceding the inquiry was to be entered as his rent This generally meant his quota of the *bachh* or revenue plus cesses and such share of the village expenses as was distributed over the revenue in fact just what an owner would have paid for the same land only calculated on the old and not on the new assessment This pro edure was reported to the Financial Commissioner The separation of owners rates will probably lead to many and troublesome disputes of this sort

617 Entry of Government Rights in Land —Government in its separate departments is in possession of a great deal of land situated in the tract occupied chiefly by the canal channels and distributaries To secure a correct record of this land officials from each department were deputed to attend the survey parties and as each village was surveyed a rough extract showing the results of survey and preliminary attestation of rights and holdings was forwarded to the officer in executive charge who compared it with his records and all objections raised by him were considered and disposed of The question of possession was when a preliminary difficulty about the canal pillars had been overcome productive of but little dispute the people as a rule accepting the canal boundaries and when they objected to them the matter being settled by myself and the canal officer on the spot

618 But the question of ownership was more difficult All the canal land I think without a single exception had been entered as property either of the village or of individuals in the old record Where land had been taken up and paid for by Government there was no dispute or in the very rare cases when there was the file was forthcoming as no Karnal records had been destroyed in the Mutiny As regards the old distributaries too it was admitted that the people had made them themselves on their own land—a fact specifically stated by the Superintendent of Canals in his No 334 of 5th December 1847 to Commissioner Delhi as a ground for refusing remission of revenue on the land so occupied —and that though Government had when the water rates were raised taken over the arrangements for their clearance yet it had acquired only possession and not property in them But the Canal Department claimed property in the old canal bed and banks on the core of long possession of inheritance

Entry of Government Rights in Land

from the preceding Government, and of what was described in 1827 by Captain Colvin as "a long existing custom, authorised when first acted upon, though the dates cannot be traced, affirming the right of Government as lord paramount to the occupation of the ancient line of water course, declaring its bounds to extend to 10 yards from the edge of the banks, and applying equally to the line of canal, and the lines of outlets and escapes from the canal" This claim the people in most instances resisted, and we could not listen to it in the face of §19 of the Land Revenue Act In his No 6501 of 6th October 1873, the Financial Commissioner directed us to ask the people, where they refused to admit the proprietary right of Government, whether they objected to the entry of a Government right of occupancy, and on our doing so, the villagers readily consented in every single instance to an entry to the effect that Government was entitled to hold the land so long as it was needed for canal purposes This entry was accordingly made, and its meaning defined by a clause in the administration paper In his No 1261 of 3rd March 1879, and subsequent correspondence, the Financial Commissioner ruled that land for which no compensation had been paid was held by Government only for so long as it was needed, and that the original owners retained the reversionary right when this ceased to be the case, this being precisely the view urged all along by the people He directed that—(1) land for which compensation had been made should be entered as Government property, (2) where no compensation had been made, the entry already described was sufficient, (3) and that even where the people had entered such land as Government property, their reversionary right should be recorded All we had to do to carry out these orders was to record the reversionary right in the very few cases, chiefly land under the Grand Trunk Road, which the people had entered as Government property Compensation was defined to include exchange of land, as well as cash payment, and when land had been taken for a road, and payment made for the cultivated parts only, it was ruled that the payment covered the whole

619 All other Government land, most of which, except that taken up within the last few years, had not been paid for, was treated in exactly the same manner, except the part of the cantonment lands retained by Government and referred to in §569—571 *supra*, the rights in which had been already defined in a regular and authoritative investigation Each department of Government holding land in the district has been furnished with the usual extracts from the register of rights and holdings, showing all the land held by it The land held in the old cantonments by the Commissariat as a grazing depôt is held on lease from the villagers, and called for no special treatment

The Register of Rights and Holdings

620 The Register of Rights and Holdings —There are only one or two points connected with this paper which call for special notice The holding of each inferior owner has been entered imme diately below the holding of the superior owner from whom the land was acquired and the total of both has been shown below that being the area which measures the share of the superior proprietor in the common land as of course he retains the common rights appertaining to the land of which he has alienated the inferior ownership The *sájjis* or agricultural partners (cf §-76 *supra*) have been carefully entered as such in the column for cultivation as I found that the common defence to a suit for rights of occupancy was that the claim ant though entered as a cultivator at last settlement was really only a *sájjí* Great care also has been taken to enter the original tenant as well as the actual cultivator in the very frequent cases of what is best described as sub leasing These subordinate cultivating tenures are often very complicated In one instance we found that a tenant with right of occupancy had let part of his land to the owner who again had taken on the tenant as his *sajjí* to cultivate the land

621 Finally in the very numerous cases in which members of the same family held distinct parts of the ancestral land out of all proportion to their proprietary shares the cases in which the separation was really one of proprietary right were carefully distinguished from those in which the division had only been made for convenience of cultivation The disputes under this head were few but when there was a dispute it was ordinarily presumed that an unequal division which had never been formally recorded or sanctioned was only of a temporary nature In many of these cases the sharers made a final partition of the land then and there and recorded the result by con sent The *Khewats* of some of the villages belonging to original Musalmán where daughters sisters and wives inherit and close inter marriage is practised where a large body of sharers hold the land at tached to each well jointly on a scale of fractional shares the least common multiple of which often amounts to many thousands and where the e shares are bought and sold daily have been prepared by wells, in all other cases by holdings arranged in such order that all holdings belonging to the same class of tenure come together while within the class the order of the genealogical tree is followed In the *khewat* of the city of Panipat the fractional shares have been shown in *kachha bíghas* as the people have from of old assumed that each well has attached to it a certain number of these *bíghás* and all their transactions and title deeds are expressed in terms of that unit But it must always be remembered that these *kachha bíghás* are simply *shares* and not *ar as* and that the actual area represented by one of them varies from well to well

The Genealogical Tree

622 **The Genealogical Tree**—This paper had never been prepared before in the district, and a good deal of difficulty was experienced in getting at the family bards, who alone could recount the earlier generations, and but few of whom dwell in the tract Every person who holds land in the village has been included, whether a member of the community or a stranger, his descent in the latter case being traced only as far as the original acquirer of the land When a member of the community has acquired land in a *panna* other than that in which his ancestral land is included, his name has been repeated along side the family from which he acquired the land, but it bears the same serial number which falls to him when entered in his proper place by descent

These papers were first prepared in the old continuous form, and were in some villages many yards long They have been faired out in book form, the tree continuing from page to page, and an index showing the initial generations down to the origin of the sub-divisions of the village, and the pages on which each branch will be found, has been prefixed wherever the tree is lengthy A careful history of the village and each of its sub-divisions has been appended

623 **Record of Irrigation Rights.**—These have been prepared separately for canals, wells, and streams, wherever they exist The well record shows the property in each well, which often differs widely from the property in the land on which it stands, a history of its construction, and a detailed account of the rights of irrigation and their incidents, which rights, again, do not always coincide with the proprietary rights in the well

624 The canal record gives a history of each distributary, the shares in the water, and the arrangements for clearing and repairing the channel This refers to the old distributaries which were made by the people In some cases these have already been superseded by new distributaries made by Government as part of the new scheme for the re-alignment of the canal With respect to them the existing arrangements for irrigation have been recorded, but the old shares in the superseded distributaries have also been shown under the Financial Commissioner's instructions In these cases no rights have been recorded, because the irrigation arrangements for the new channels are not yet finally completed, and because, if the people be considered to have any rights at all in the irrigation from them, those rights will be based on, and measured by, the old-standing irrigation of past years Where old distributaries run through several villages, the existing rights and responsibilities existing between the various villages as wholes, are recorded in

the administration paper in the part which concerns relations with other villages

625 The record of irrigation rights in streams has only been prepared for a few villages in the Nardal and there even the rights are as a rule unimportant The general plan is the same as that adopted for the record of canal rights

626 **Preparation of the Administration Paper** —To the preparation of this paper I have devoted special care for I consider it the most difficult and almost the most important paper in the re cord *The administration papers of last settlement were exceedingly* imperfect omitting an immense number of points on which they should have contained information I therefore first framed a series of questions to which answers were obtained by the patwárís for each village Meanwhile from my personal knowledge of the customs of the people I prepared a specimen administration paper including every point which I thought should be included in the paper Where different forms obtained with great generality in different tracts as for instance the *lnt* arrangements described in § 276 *et seq* I gave a pattern section for each This specimen I gave to the Deputy Superintendents as a pattern by which they should be guided in pre paring the paper The answers already collected by the patwáris were then worked up into a rough paper for each village on the specimen form and this paper taken and attested in the village itself by the Deputy Superintendent There was of course a danger that the Deputy Superintendents should adopt the provisions of the speci men paper on points where they were of tolerably general currency without being sufficiently careful to assure themselves that they really corresponded with the custom of the village On the other hand there were the answers already obtained to the questions before the specimen paper had been seen Moreover I myself went over with the whole of the Deputy Superintendents the first few papers attest ed by each word for word and their attestation files and afterwards examined others prepared by each man And the Superintendents when travelling about attesting the disputed entries themselves attest ed one or two of the sections which I selected as most likely to have been carelessly treated and a few others taken at random in every village Every single disputed case in which the people did not themselves come to an agreement before the Superintendent was referred for my sanction to the Superintendent s order before the entry was finally made and I thus saw exactly how the work was being done The customs from village to village follow the same general form though they differ in minute details it is exceedingly important to secure a uniform plan and method of treatment for these papers and above all it is most difficult to ensure that none of the

many small points which are essential to the completeness of the record of customs should be omitted All this could, as far as I can see, have been ensured in no other way than that which I adopted, and I believe, from personal examination, that these papers have been very carefully and well prepared

627 Plan and contents of the Administration Papers—The administration paper has been framed on the three-fold division laid down by § 13, ¶ V of the Land Revenue Act It has been carefully arranged, so that the sections follow, as far as possible, in logical sequence I have given the arrangement of sections in Appendix B, the headings of the sections being the same in all villages, but clauses being dropped out where not needed This index will be useful when the papers have to be referred to, and will show what subjects have been included in them

628 Many of the provisions will be touched upon in treating of the subjects to which they refer The chief additions which I have made to the paper are as follows —Precise rules regarding the method of the yearly distribution of revenue have been inserted, the *bachh* papers hitherto made by the patwárís having been very unsatisfactory, and often quite unintelligible without the verbal explanation of the patwari himself Especially revenue-free tenures have been separately classified for this purpose, according as the land was really revenue-free, in which case no revenue is collected, or the revenue was merely assigned, in which case the revenue was collected as usual, but paid to the assignee instead of Government A full account of the customary terms of agricultural partnership has been added These terms are fixed by custom for each village, and are not specially agreed on in each case, and it is important to record them A similar detail of the customary incidents attached to rents has been given, for instance, which menial dues are payable by each party, and the like A careful record has been made of many of those numerous customary rights which are similar in aspect, though not in origin, method of acquisition, and incidents, to easements, and about which there was so much discussion when the draft Easements Bill was circulated for opinion Of course many of these rights are so minute in their nature, or so universally acknowledged, that it would have been unwise to attempt to record them But I have recorded many of the most important, and of those which I know to be oftenest subjects of dispute Of course the actual custom of the village has been enquired into in each case, and in cases where the reply has been that there is no custom on the point, the section has consisted of a note to that effect, or the clause has been omitted Under the Financial Commissioner's direction the customary method of levying the pay of village watchmen has been carefully recorded—a subject entirely omitted in the old papers.

Village Note books

629 Record of Tribal Custom —*The record of tribal custom* has been prepared by the Extra Assistant Settlement Officer, the questions being based upon Mr Tupper s series so far as it applies to the Tract. I considered that the inquiry would be best made by a native official and the paper has been very well prepared When completed I went through it carefully with the Extra Assistant Settlement Officer and recorded my opinion on one or two points which *seemed to me to call for remark. It is in the form of question and* answer the answers of the various tribes being shown side by side and it is divided into three parts the first part giving the customs of the Hindu and converted Musalmán tribes the second those of the *original Musalmans so far as they differ from the Mahomedan law* and the third part being a collection of instances and *cases in point* collected from the district records and from the results of the present attestation The principal customs recorded have been already broadly summarised in the sections on the tribe the family marriage and the like

630 Village Note books —The form of village note book was very carefully designed and gives very complete information My notes to each village set forth my grounds of assessment very fully indeed least fully in Pánípat Bangar where the assessments had to be got out and announced *against time to catch the harvest* The assessments were of course based upon the first figures obtained from the preliminary testing and the figures finally obtained differed slightly from them I should have preferred to show only the data used in assessment in the village note books as the subsequent corrections are quite *insignificant but it was decided that this would be* misleading so the original figures have been shown in black and the final figures where they differ in red The crop details were not made out afresh as to do so would have served no good purpose The area held by occupancy tenants has been corrected but that held *by tenants at will has been left as it was first made out before* attestation as it is quite meaningless It shows the area held in tenancy but does not show how much of that area *is common land in the* hands of individual members of the proprietary community so that it affords little guide to the area really held by true tenants which is the point upon which information is needed This information was not obtained before *assessment as I had overlooked the confusion* of tenure and after assessment it would have been *interesting rather* than useful and would have cost time and money to compile so I have left the figures as they stood The population and cattle statis*tics are obtained from the settlement* census *The details of* past balances and remissions are wholly untrustworthy but are the best that could be obtained Wherever I have been able to check them I have found them incomplete and often incorrect

Character of the Record.

631. I am heartily ashamed of the fair village note-books—so many of them are copied out so badly. I had a small but efficient staff of English writers with which I should have had them copied out neatly and in comfortable time. But last cold weather I was suddenly put on special duty, which occupied my English staff for more than three months; arrears had then to be worked off; my best writer was presently transferred to the Settlement Commissioner's Office; and the copying had to be hurriedly done at the very end, when I was unable to supervise it properly myself, while there never has been a head clerk in the office. No English writer would come from Ambálá or Delhi for such temporary employment, the column printed for one set of figures had to be made to hold two—red and black; and altogether the result, so far as appearances go, is discreditable to the settlement. But, of course, for all practical purposes of use, the statements are as good as though they were printed. The vernacular note-books have been carefully faired and bound up, and deposited in the district office.

632. Character of the Record.—I believe the new settlement record to be well prepared, and especially so in tahsíl Pánípat, which, being far the more difficult of the two, has received greater attention than its neighbour. The "jungly" nature of a great part of tahsíl Karnál, and the terrible unhealthiness of the city, have rendered it difficult to get good men to work there; while the Deputy Superintendents of tahsíl Pánípat turned out to be far superior to those employed in tahsíl Karnál. In the latter tahsíl, too, a great deal of work which had been scamped while Kidár Nath was in charge of the office had to be re-done. Thus I believe the Pánípat record to be on the whole better than the Karnál one; but I believe the latter to be good. The record for the four divisions of the city of Pánípat has given us infinite trouble. The rights to be recorded were peculiar and complicated; it was always difficult to obtain the attendance of the people, who habitually disregarded the orders of the authorities, while the native officials were apparently afraid to enforce their commands; and a very large proportion of the owners were either absent on service or strictly secluded women. Some of the leading men were appointed to attest in person all powers-of-attorney granted by women; in all cases of doubt a commission was issued to take the woman's statement at her own house; and every effort was made to obtain the attendance of absentees, full notice being given in all cases where the individuals could be traced. We had not the advantage of a former settlement, the papers prepared in 1850 being a record of rights in name only, and complicating rather than simplifying matters. But the record prepared with so much labour for the city is exceedingly complete; and I believe it to be correct with the exception of such errors as may have been caused by the absence of persons who, after due notice, failed to attend to record their rights.

CHAPTER XIX —SUBSIDIARY OPERATIONS

633 Di alluvion Proceedings —Under the old settlement the 10 per cent rule was in force and as it was unaccompanied by any provision for distributing the loss caused by diluvion over the community and as land newly thrown up is invariably the common property of the village even when found on the spot where the land of an individual has just been cut away the result was that great hardship was inflicted upon particular landowners who often lost a large proportion of their land but could obtain no relief because the injury did not amount to a tenth of the whole assessed area of the village In accordance with the orders of Government each case of gain and loss will in future be considered without limit as to extent and the change of system was hailed with great joy by the villagers

634 The old di alluvion papers had fallen into a very bad state and it was often almost impossible to identify the land to which they referred Till however the new papers were ready we had to work upon them as a basis As soon as the new demands were assessed we took our papers which had been as mentioned in § 608 *supra* corrected up to 1875 76 and on the areas shown in which the assessments had been based and prepared the di alluvion record so as to include all changes that had taken place since that year I have drawn up full instructions for future procedure I personally superintended the preparation of the first yearly papers in each tahsil and I think that little difficulty should be found in future The foundation of my plan is to file on each record two maps one showing the state of the land as last assessed and the other the present state In no other way can alluvion preceded in the same flood by diluvion on the same spot be shown and the inability to do this on the old one map plan was the cause of the confusion which we found existing

635 I would draw the attention of future revenue officers to the blind and unreasonable manner in which culturable alluvion was formerly assessed If newly formed land had a skin of loam so thick as to justify it being classed as culturable the full settlement rate fixed for culturable land was at once imposed Now not only is the new invariably inferior to the old soil but the settlement rate was imposed upon the latter in the expectation that some of the culturable area would be brought under cultivation during settlement and was in fact a discounting of future improvement which it would be impossible afterwards to assess But as alluvion is

always re-assessed directly it is brought under the plough, the settlement rate is wholly inapplicable to it while it is used as pasture only The result of this system in one or two villages has been quite ruinous, the demand actually increasing as the resources of the village diminished

636 In former days a custom existed throughout the riverain villages of the Tract that, when an individual landowner had his land cut away by the river, an equivalent area from the common land was given him in exchange, the loss being thus borne, as far as possible, by the whole community Numerous old letters attest the universality of this custom Unfortunately, the old administration papers are silent on the subject Yet in 1856 the Government, in concurrence with the Board, ruled that although no provision was contained in the settlement record, yet the allotment of common land in these cases was borne out by usage, and should be enforced In preparing our new administration papers, I directed particular attention to the record of this very admirable and equitable custom, wherever it might still be found to exist In some of the villages it was found in full force, and recorded accordingly, in fact, I know of several instances in which it has been acted upon within the last few years But in many villages the people declared that no such custom now obtained, and I did not think it right to propose them to record for future guidance a rule, however admirable, which they averred was not at present in force But the decadence of the custom is much to be regretted Its principle is an admirable one, and one that, in my opinion, ought to be extended by legislative enactment to all cases in which the landed property of individuals is taken up by Government for the good of the public The loss to the individual is absolutely irreparable, and no money compensation can cover it If, however, common land were given in exchange, and part of the compensation paid to the village, the injury would be reduced to a minimum

637 I may note here that the deep stream is recognised as the boundary between villages on opposite sides of the river all along the part of the Jamna under settlement The year before last (1878) a considerable cultivated area was given up without dispute by the Tánda people to our villages under the operation of this rule The custom is recorded in the administration papers on both sides of the river

638 Remissions on account of Reh and Swamp —*In 1872* the Lieutenant-Governor marched through the canal tract, and recorded a minute on the working of the canal system and the spread of *reh* and swamp Upon this I was directed to submit, at the end of the settlement, proposals embodying the best and most equitable arrangements in my power for granting remission of revenue on land injured

Remissions on account of Reh and Swamp

by the evil Under the orders of 1860 referred to in §166 8 *supra* a yearly inspection of the canal tract used to be made and remissions given on land injured by *reh* or swamp within certain defined blocks so long as the injury amounted to 10 per cent of the area. These operations soon became part of the tahsíl routine and suffered in consequence falling very much into the hands of the patwárís and becoming a mere matter of arithmetic. I therefore proposed to substitute for them a five yearly inspection more especially as land does not become barren from these causes *per saltum* However the Government ruled to my great regret that no periodical revision should be undertaken but directed that the patwárí should show all land so affected in his yearly papers and that I should draw special attention to the subject in this report I have already dwelt sufficiently upon the terrible nature of these evils in pages 65 to 71 of this report and it is to be hoped that the re alignment of the canal now nearly finished will diminish their intensity But every new distributary that may by leaving a drainage free render productive many acres of swampy or *reh* stricken land will almost to a *certainty* render barren some portion greater or smaller of the good land through which it runs And the new distributaries following the high levels as they do pass through all the finest and most valuable cultivation of the tract Where the injury is small in extent it may still be of serious importance to the individual owner who may lose a great part of his holding These cases can be easily met by directing that the land rendered unproductive shall be excluded from the *bachh* as the people have readily attested a clause in the administration paper providing that the method and rules for *bachh* can be altered by the revenue authorities at the prayer of a landowner

639 Cases of more extensive injury can of course be effectually dealt with only by revision of demand And though the evil as a whole will I hope decrease in the future yet he must be a very sanguine man who asserts that no very great local damage will be done by the new canal run to render the navigation of the futur high embankment or still worse of sandy stratum In the event of such injury occurring I would venture to urge that relief so far as revision of revenue can be called relief for total loss of land be afforded promptly and liberally The *on chance* of a village when *reh* is advancing to the attack is high cultivation I speak from minute and extensive local knowledge Given plenty of manure cattle water and cultivators and the inroads of *reh* upon the cultivation—in the pasture nothing can stop it—are if sure yet slow while it rushes over starved poor cultivation like a flood Now it is impossible for a village to cultivate highly if while it is losing some of its land year by year and while the fertility of the rest

is gradually diminishing, it is hampered by an assessment which, however just when first imposed, is too heavy for the altered circumstances of the soil And it is no use deferring relief till the mischief is done and the village has sunk *Reh* is not an occult cause, the existence of which can remain open to question, and there should be no fear of reduction being obtained by groundless complaints Let the existence of serious injury be carefully ascertained, but when once certified, let adequate relief be dealt out at the beginning, so as to give the people a chance in the struggle If this had been done during the currency of last settlement, Government would, I firmly believe, be receiving revenue on hundreds of acres which now lie white with salt *It should not be forgotten that the loss of its pasture land alone is a* very serious blow to a village, as it compels them to resort to stall-feeding, and to devote a much larger area than formerly to fodder crops which do not help to pay the revenue, and this just when the culturable area is contracting year by year

640. Against swamp nothing can be done, and the question of remissions on this score is a difficult one, for excessive moisture, causing what Mr Sherer calls dry swamp and the people call *chol*, is not so unmistakably apparent as *reh*, and it is difficult to say when it has really rendered a field barren It is hard for the unexperienced eye to convince itself that the field close to the canal, which is so green with grass, is really so cold and sour from constant soakage that seed rots as soon as sown in it And low-lying stiff rice soil apparently does not suffer in intrinsic quality from swamping, the only question being, for each year, how much of the crop will be drowned by the rising water On the other hand, the rice must be sown before the nature of the season is known, and loss of seed and labour repeated year after year often prevents the people from sowing in a season in which it becomes apparent, but too late to take advantage of the fact, that a good crop might have been sown

In villages which have no spare culturable land of decent quality, and especially where the population is large in proportion to the cultivated area, the definite abandonment of a field is fair proof that it is really barren, for it would not pay the people to abandon it in the mere hope of remission of revenue And it is, of course, in such villages only that, as a rule, remission is needed

641. Partition.—During the currency of the old settlement a certain not very large number of partitions of common land had been authoritatively effected But in *most* of these cases it was found that the people had never acted upon the partition, and in many of them, that the papers were useless, it being impossible to trace the land entered in them, and land having occasionally been taken into account

Partition

which had no existence at all In most of these cases the people set aside by consent an arrangement which had never been carried into effect and the details of which they had forgotten But in many others we had great trouble land belonging to private individuals having been included in the partition and the actual areas allotted being found when measured to be grossly disproportionate to the shares upon which they had been based Each case had to be gone into minutely and each difficulty decided on its merits my guiding rule being that an allotment duly sanctioned and since acted upon must be upheld however unjust, but that when many years had elapsed without any material effect being given to it and action distinctly conflicting with it had been taken without opposition it might be considered to have been abandoned by consent.

642 During the progress of settlement operations we have had 351 applications for partition for the most part relating to village common lands and the effecting these partitions has been one of the most difficult and laborious tasks we have had to perform especially as most of the applications were made after field operations had been completed I was at first directed that if a majority of the owners claimed partition it should be allowed as a matter of course unless barred by the administration paper and under those directions I allowed several partitions which I now think ought not to have been allowed In my opinion division of common land between the several wards of the village and a further division between the individual members of the community of so much of the common land as is cultivated and of as much more as is necessary to make up the shares without disturbing existing cultivating possession is seldom harmful and generally advisable But I object strongly to partition of the whole common lands between the individual members for it would if acted upon deprive the tenants and other non proprietary residents of their rights of common pasture &c which they are entitled to enjoy so long as the land is not really needed for cultivation without conferring any corresponding advantage upon the owners My consolation is that I have never yet known such a partition to be really acted upon though I know many cases in which it has been made

643 Each member of the community has a right to break up common land in proportion to his measure of proprietary right in it But in actual practice the man with sons and oxen breaks up land and he who is without does not When the latter eventually becomes in a position to break up more land he finds the best parts of the common land already occupied and the village is often disinclined to allow further encroachments upon the pasture land which is perhaps becoming scanty in extent Under these circumstances disputes are

frequent While the right of each owner to cultivate a proportional share of the land is freely admitted, the whole feeling and custom of the country-side is, as already noted (§ 259 *supra*), *strongly* against the disturbance of an owner who has been allowed to go to the expense of breaking up common land, and, only the other day, the whole of a large sub-division of an important village agreed of their own accord to accept, in partition of the whole common lands, an area very largely in defect of what they were proportionally entitled to, rather than offend against the recognised custom by ejecting another sub-division which had broken up nearly twice as much land as its proprietary share in the whole common lands amounted to

644 The Financial Commissioner, in his remarks upon Mr Tupper's series of questions, objected to the discretion of the revenue authorities in ordering partition being fettered by entries in administration papers But here it was impossible to leave that discretion wholly free The administration papers of last settlement contained very stringent provisions on the subject, forbidding partition in many cases absolutely, in still more save by unanimous consent, and in almost all the remainder except by consent of the majority In a revision of settlement it was impossible to alter these provisions except by consent of the community, and where the pasturage was limited in extent the people were very tenacious on the subject, strongly objecting to any relaxation of the rules But the right of the individual owner to cultivate a proportional share, and the subordinate right of the breaker-up of land to retain his possession undisturbed, were universally admitted, and these being recorded in the administration paper, I proposed for the assent of the people a further clause, which was, I think, agreed to without any exception It provided that the Revenue Authorities could, in disregard of any recorded stipulation on the subject, and at the prayer of any single owner, direct partition of the whole cultivated portion of the common land, and of so much uncultivated land as would suffice to enable each man to receive his full share, with due regard to quality as well as area, and at the same time to leave each in possession of the land he then actually cultivated Thus, if *A*, *B*, and *C*, have one, two, and three shares, respectively, in a village, and each has broken up 100 acres of the common land, these 300 acres, and, neglecting quality, a like uncultivated area would be divided, so as to leave *A* in undisturbed possession of his cultivation This meets, I think, the object aimed at by the Financial Commissioner, and is the best I could do in the matter

645 Distribution of the Revenue—The method by which the revenue was to be distributed was reported to me for each village, and not acted upon till it had received my sanction The procedure

Distribution of the Revenue

was much simplified by the great majority of the villages adhering to their old system of an all round rate almost always imposed on cultivation only The primary distribution over the wards of the village was often by shares but the ultimate distribution over the land was made by an all round rate in 240 villages by shares in 8 villages and by soil rates in 31 of the 56 remaining estates in which distribution was neces ary I explained carefully to the people of each canal village separately that the separation of the owners rates if not allowed for would really make the all round rate a very unequal one as the canal land would pay owners rates as well as revenue while the well land would pay revenue only But in most villages they thanked me kindly and held to their old plan And it no doubt finds its justification in the fact that roughly speaking the various kinds of soils are proportionally distributed among the several holdings Its adoption however led to some curious results In the first place the object of the exemption of land already assessed as well irrigated from the incidence of owners rates directed by the Canal Act was entirely defeated the additional assessment on account of well irrigation being distributed over the whole area Again remission of revenue allowed under protective irrigation leases (of which we have granted 81 involving a temporary remission of Rs 1 563 of which some Rs 1 06_ is in Mandal villages) brought the rate on the well land below that on dry land held by other people and in some instances the remission was actually greater than the whole revenue on the land in question This was owing to some pasture land having been included in the distribution and was eventually corrected by its being excluded by consent

646 When soil rates were used and there was a dispute I had free recourse to arbitration as also in the preparation of the administration paper while in the matter of rights in land I did not permit arbitrators to be employed as I considered their use would be a virtual evasion of the provisions of § 19 of the Act I took care when there were revenue free holdings in the village that the rates should not be so adjusted as to unduly enhance the revenue assigned

647 In the city of Panipat and one or two similar villages a purely arbitrary distribution of revenue had been adopted at last settlement In two cases the distribution was over individuals and not over land the leading and wealthier men escaping almost scot free while the poorer owners paid their revenue for them I reported the circumstances fully to the Financial Commissioner and contended that Government was entitled to demand that the original distribution of the revenue by which it would be collected should bear some intelligible and approximate relation to the value of the land upon which

it was assessed The Financial Commissioner confirmed my view, and the distribution was accordingly made upon the land owned by each person, any agreement as to realising it from the proceeds of common or other land being recorded in the administration paper, to be followed in the first instance in the yearly *báchh*

648 Investigation of Assignments of Land Revenue—The revenue-free investigations were very laborious The cases numbered 261 The old vernacular records were exceedingly incomplete, and in very many cases no orders at all were on the file The Extra Assistant Settlement Officer investigated each case very thoroughly, and then handed it over to me I had in 1873 gone through the whole of the English correspondence in the old letter-books from 1819 to 1857 letter by letter, and had made notes of many matters But I was not, at the time, aware of the precise points to which I ought to direct my attention, and consequently I had to repeat my search in great part, at the cost of very great labour, as no indices or registers of correspondence exist, but eventually I was able, in almost all instances, to complete the history of the case Many of them required reference to Government for final orders, there were several general points which needed decision, and I sent up the whole proceedings in a detailed report which will be found in the district office Such of the revenue-free holdings of the tract as date from before the Mutiny—and there are only five which do not—are governed by Regulation Law, which is exceedingly intricate A summary of it will be found in my report above alluded to, which will be useful for future reference The amount of revenue assigned is shown in Statement No XIX The odd 8 annas of assessment is caused by half a village being included in the Mandal Tract The odd 7 annas of assigned revenue is caused by two parts of the city of Pánípat paying permanently fixed quit-rents which are not in full rupees The register has been prepared both in English and in vernacular, and filed in the district office

649 Zaildars—The levelling tendency of our rule of which the people complain so loudly, has long ago reduced to the common level such natural leaders of the people as may formerly have stood above it To remedy this defect it was determined to introduce zaildárs into the Tract I ventured to oppose the proposition, but my objections were overruled and I am now convinced that they were ill-grounded, and that it would have been a misfortune to the Tract had they been listened to The *thapas* afforded a ready-made basis for the division of the villages into *zails*, and I proposed to base the division almost wholly upon them, and to slightly modify the boundary between the tahsils of Pánípat and Karnál Sanction was refused to the modification, and consequently two *thapas* have been split

up and Haulánia Játs included with Delha Rájputs and Gujars I regret this result which was the cause of much ill feeling at the time as I think that in an experiment of the sort it was important to carry with us as far as possible the feudal feelings of the people With this exception the division has been almost wholly based upon the *thapas* of origin which differ somewhat from the Imperial revenue *thapis* shown in map No VII But where the tribe has changed since the foundation of the village I have kept people of the same tribe together as far as possible even at the expense of the *thapa* divisions The zails are shown in map No VI that of Baras is incomplete the remaining villages which should belong to it not having yet come under settlement The *zaildars* were chosen by a combination of election and selection all the elections being held by me in person in each *zail* Men who are still recognised by the people as their hereditary leaders such as the *chaudhris* of the two tahsils were elected almost unanimously But such men are few and as a rule the election system did not work well sometimes failing even to elicit the real wishes of the people The voters were the village headmen of the *zail* and many of them felt bound to vote for men of their own village or for themselves so that a very great many votes were thrown away upon people who could not possibly have been accepted as *zaildars* even if elected —votes which might if confined within the limits of leading men have altered the incidence of the majority I think a far better way would be to select all the men in the zail who are of sufficient influence to be fit for the appointment put those up to the vote refuse all votes except for one or another of them and abide strictly by the issue There are are seldom more than three or four such men I think the *zaildárs* selected are on the whole very nearly the best men that could have been chosen There are thirteen of them and they are paid by a deduction of one per cent from the revenue excluding owners rates the deductions on assigned revenue calculated in whole rupees being paid by the assignees Their whole emoluments amount to Rs 4 98 8 I fear I made a mistake in the first instance in making my *zails* so large I included two *thapas* in each because the men of influence who were fit for *zaildars* were few and because I was anxious to make the post a valuable one so as to give *éclat* to the new system It would be unwise to split up the *zails* now but I think this might be done perhaps at next settlement I have remarked upon the insufficient income of the Jundla chaudhri and expressed a hope that it may at some future time be supplemented in § 582 *supra*

650 Chief Headmen —The system of appointing chief headmen was introduced together with that of *zaildars* The general

rule was, that a chief headman should be appointed only in such villages as had three headmen of the same caste and of the same gens The appointments were often difficult, as in many villages there was no man really fit for the post I made all the appointments in person, moving about the district, and holding elections every day for the villages round about The elections were practically a farce, as the voters were the individual members of the community, and except where a headman had made himself really obnoxious, each man, as a rule, felt bound to vote for the headman to whom he was subordinate Thus the result depended, not even upon the number of clients belonging to each, but upon the number of those clients who would take the trouble to attend the election The man who obtained a majority was often a minor, or a youth only just appointed, or a man in all respects wholly unfit Wherever he was fit for the post he was appointed, however many there might be more fit in the village, and when he was distinctly unfit, the election was set aside and selection resorted to The chief headmen are remunerated in the same way as the *zaildars* There are 143 in the tract, and their total yearly emoluments amount to Rs 3,190-8 So far, I fear they have been made but little use of

651 Village Headmen —I have described in § 235 *supra* the manner in which the crowd of so-called headmen was reduced at last settlement During the progress of my operations I have been inundated with claims to the office by the descendants of the men who came under reduction Other and more reasonable claims have also been set up by families who are unrepresented by a separate headman When the selection of 1842 was made there were no genealogical trees in existence, and I have little doubt that the selection would often have taken a different course had the Settlement Officer had such a tree before him, for in many cases the headmen are very unequally distributed between the branches of the community But after careful consideration of each case, I found that in no case did the circumstances justify an application for special sanction to any increase in the number of headmen, often already too large On the other hand, I refused on principle to entertain the question of a mere re-distribution of appointments which had been arranged more than 30 years ago But I did intend to propose reduction in the number of headmen in a good many villages, not by dismissal of existing office-holders, but by selecting such headships as, on a review of the village scheme, it seemed most advisable to retain, and providing in the administration papers that the other headships should not be filled up after the death of their present incumbents The Financial Commissioner, however, directed that no selection should be made, and that if any provision was recorded, it must be that the headships should lapse in the order in

Patwaris and Qanungos

which they fell vacant till the required reduction was effected I did not feel prepared to make this proposal in any village and the matter fell through The cases in which there were very strong grounds for reduction were not numerous

652 Little care is taken at the tahsils that the duties of the office of village headman are really performed by the men who are shown on the district registers as responsible for them An old substitute is allowed to represent a headman long after he has been formally dismissed or a headman is permitted to act in person while he is still supposed to be represented by a substitute and too often any near relation who brings the seal of the headman is accepted as his representative I think that this looseness of practice tends to weaken the sense of responsibility which the headman should feel It is certain that when I came to the district the headmen seemed hardly to recognise the fact that there were duties as well as privileges attached to their office for the due discharge of which they were personally responsible

653 The Financial Commissioner some time ago sent down a reference on the question whether the custom of representation obtained with regard to this office This directed my particular attention to the point and I have satisfied myself that the custom described in § 238 *supra* and recorded in the administration paper is really recognised by the people

654 **Patwaris and Qanungos** —When I began my settlement the patwáris staff was in an exceedingly bad condition There were 111 patwáris in all of these 21 could write the Nágri character only only two were possessed of even the most elementary acquaintance with the use of the plain table and 25 of them were utterly incompetent On the other hand many of the Pánípat patwarís being members of Panípat families were better educated and more intelligent than the ordinary run of patwárís but they lived at their homes in Pánípat and used to leave the city by one gate as the tahsildar went into camp by the other I have already described in § 596 *supra* the very stringent orders we received about teaching the patwárís to survey At present the staff has been increased to 116 of whom with the exception of three newly appointed men who have yet to pass the patwárís school every one is a trained surveyor and almost every one is fully competent to survey the whole of a large village single handed But this result has been attained not only at the cost of great delay in the operations but by the dismissal of 54 ou of the 111 patwárís I found when I came here and the replacement of 10 others by their sons or other relatives Of course some of them have been dismissed on other grounds but the majority have been turned off because they were either

generally incompetent or unable to survey I obtained, with some little difficulty, special permission to retain ten old patwáris of very long service, admirably fitted for the post in all other respects, but too old to learn survey, in all other cases I was compelled to dismiss any man who could not acquire an efficient knowledge of survey I think the orders on the subject were too stringent A patwári in the ordinary performance of his duties is seldom called upon to do more than survey small plots, and in the very exceptional cases, such as partition, where more is wanted, a surveyor can always be appointed to assist him And I think it a positive mistake to give him a higher training than will be really needed by him after the completion of settlement operations The time spent in teaching him beyond this point is sheer waste, and involves expensive delay of settlement work, and the more competent a man is in other respects the greater that waste and delay, as the greatest anxiety is felt to avoid the hard necessity of dismissing him If he is to be turned off, a new patwári is substituted for an old one, which is always a misfortune If he succeeds in learning, there is every danger of his throwing up his post as soon as the high pay of settlement is cut down to the ordinary patwari's rates, in exchange for the much higher pay and more independent position of a settlement *amín*, for which work his training has fully qualified him The patwari staff, as I leave it, is a most admirable one, but I am not at all sure that many of the men will not soon resign their appointments I have already lost a good many very good men in this way

655 In order to guard as far as possible against this danger, it became important to provide reasonable rates of pay for the patwáris, many of whom were drawing, when I joined the district, less than Rs 7 a month The staff has been somewhat enlarged, there being now 116 patwáris and 16 assistants Of these all but 7 write Persian The circles have been re-arranged with the greatest care on the principle, insisted upon by the Commissioner, that each circle was to lie wholly within the same *zail* The circles have also been so fixed as to coincide with those of the canal patwarís on the main line and Delhi canals, with the exception of one village, which could not be arranged for The canal circles on the Rohtak and Hansi branches are shortly to be revised, and the Executive Engineer has been furnished with a map showing our circles, and asked to base his new divisions upon them as far as possible The monthly pay now varies from Rs 14 to 9, and the assistants receive Rs 8 Besides this, patwáris of canal circles who attend duly upon the canal measurements receive a bonus calculated on the owners' rates, the amount of which will often be considerable, and in consideration of this they are not allowed to be promoted to the first grade But the greatest improvement that has been made is, that the pay is no longer fixed for each circle, but is personal to the patwári, the appointments being graded, so that promotion can be given

without transferring a patwári from an old to a new circle. The old system of the patwáris receiving from the village the cost of their stationery which was liable to abuses has been abolished and each man will receive a monthly allowance of one rupee to cover these expenses

656 Sanction has been obtained to the appointment of six *girdáwars* or supervisors from among the patwáris. These men are all first rate men and have been either munsarims or naib munsarims on the settlement staff They should prove invaluable to the district officer and should go far to keep the yearly papers up to the standard All the income from the patwáris cess will be funded for the whole tract and the patwáris and girdáwars paid from it

657 The old sadr qanungo was quite useless and I did not take him over He has just been pensioned off and one of my best Deputy Superintendents appointed in his place The qanungo and naib qanungo of Karnal were incompetent and were presently replaced by new men who have since received training on the Superintendent's establishment. Those of Pánípat were good men to begin with and have enjoyed the same advantages. With the staff as it now stands and with careful supervision the record might easily be so kept that the revision at next settlement should be a very simple matter The one thing wanting in my opinion is lithographed field maps on which all the alterations of each year could be noted and a copy filed with the yearly papers I was unable to obtain sanction to the cost of lithographing them which would not have been great as we had to lithograph the maps of a great part of the district for the Canal Department and extra copies could have been struck off for little more than the cost of the paper As it is I have secured five extra copies of each map which will no doubt be useful in the district office

658 **Cesses**—The cesses that have been sanctioned are as follows —

	Rs	a.	p
Local rates	8	5	4
Road cess	1	0	0
Postal	0	8	0
School	1	0	0
Lambardár cess	5	0	0
Patwári cess	4	4	0
	20	1	4

These are percentages levied on the fixed revenue and owners rates The local rates have been fixed by legislative enactment Fortunately the first imposition of this cess coincided with the expiry of the term of last settlement so that the people looked upon the additional demand as natural enough Some of them thought it was meant

to cover settlement expenses, others, that it was on account of the Duke of Edinburgh's visit The cesses will be taken upon assigned revenue and, I believe, upon owners' rates, though the latter question is still under reference The local cess is at present collected in equal instalments at the two harvests, all other cesses being levied on the actual revenue collected at each harvest This arrangement complicates accounts, already very intricate, and I have proposed that the local cess should be collected in the same manner as the other cesses, but the matter is as yet unsettled Due power to alter the cesses or impose new ones has been reserved to Government in the administration papers

659. Extracts from the Record of Rights.—The parchah Khatauni, or extracts from the final register of rights and holdings, were roughly bound up into little books before distribution to the people, the proprietary and occupancy extracts being distinguished by different coloured cloths The total income derived from this source was Rs 49,844, in addition to Rs 4,518 realised for the preliminary abstract

660 Canal Copies of the Record—We have lithographed the field maps of the canal villages, to the number of 140, including 223,260 acres and 610,694 separate plots, for the Canal Department, giving them 50 copies of each Besides this, we have copied the field registers of these villages, including 797,121 separate entries, for the department The Superintending Engineer decided for the sake of cheapness, that the name of only the owner and cultivator standing first in the entry of the field should be shown, which somewhat reduced our labour

661 The Final Girdawari.—I had fully intended to make a field-to-field *girdawari* the last thing before handing over the record, so as to give the district officers a complete record of all alterations that had taken place up to date, and that might have remained unreported or undetected In Karnál this work was done in March and April 1880 Mutations of names were formally sanctioned in all cases in which this had not already been done, and the cases added to the detail of settlement cases given in the final proceeding, so that there is an absolutely complete record for that tahsíl up to date

In Pánípat all arrangements had been made, and the patwárís were just about to start for the same work, when, in the month of May, the orders about the patwárís' cess, till receipt of which the files could not be completed, reached us, and it became necessary to set every available hand to work to finish up the record Owing to this delay the *girdawari* could not have been commenced till after the rains had set in—a time when field work is impracticable in a great part of the

canal tract—and could not have been finished till just before the spring sowings immediately after which the same ground would in any case have had to be gone over again in order to prepare the yearly papers I therefore determined to make no *gudawari* in Pánipat. The cases of unrecorded alienations detected in Karnal were very few in number the Panipat papers are better prepared than those of Karnál the patwári staff is exceptionally good and the qanungos and *gudawars* all trained in the settlement and there should be no difficulty whatever in the preparation of the first yearly papers

662 Making over to the District—Besides the papers already mentioned detailed statements of the distribution of crops and soils as existing at survey have been drawn up a patwaris book showing the boundaries of zails and circles and giving the character of each patwari and containing an abstract of the orders upon future patwári arrangements has been prepared the results of the settlement census have been abstracted a copy of the instructions upon which the di alluvion proceedings have been started has been made complete village indices showing circles and serial numbers of all sorts for reference have been prepared maps on the scale of 4 inches to the mile have been coloured to show the distribution of cultivation pasture *reh* and swamps surface levels and drainage lines and all these papers have been made over to the Deputy Commissioner as they will be useful to him while some of them will be invaluable to the next Settlement Officer if they escape the white ants Each patwari has been furnished with a complete set of surveying instruments and spare sets have been deposited in the district office The office records have been sorted out carefully the English ones by myself in person those of importance made over to the district and the rest destroyed Especially the papers connected with the attestation of each village have been collected and made up into files and though not judicially admissible as evidence will be valuable in enabling the courts and Executive officers to grasp the real points of any disputes about land that may date from before our record for the attestation proceedings are exceedingly full and minute and the real gist of the dispute is arrived at far more speedily and accurately in the field than can possibly be done in court or office

CHAPTER XX.—THE ASSESSMENT—GENERAL CONSIDERATIONS

663. Basis and scheme of the Assessment.—The instructions by which I was to be guided in the assessment, were conveyed in Government Panjab No 1615, dated 3rd November 1873 They laid down that the demand was "not to exceed the estimated value of half the net produce of an estate, or, in other words, half the share of the produce of an estate ordinarily receivable by the landlord, either in money or kind" They directed me to pay special attention to produce estimates, and they further ruled, that I was to "take into consideration all circumstances directly or indirectly bearing upon the assessment, such as rent-rates where money-rates exist, the habits and character of the people, the proximity of marts for the disposal of produce, the incidence of past assessments, the existence of profits from grazing, and the like These and other considerations must be allowed their weight" Finally, they laid down that, after sanction had been received to the rates and gross assessment proposed for each tahsil, "full consideration must be given to the special circumstances of each estate in fixing the assessment to be ultimately adopted"

664. The most satisfactory basis of the settlement would have been rent rates, had such been forthcoming But I have already explained that true rent at competition rates is almost unknown in the district Accordingly, as the share of the produce ordinarily receivable in kind by the landlord is fairly well established, estimates of the gross produce of the land assumed a peculiar importance

665. The district is not an easy one to assess The Nardak is very uniform, and a knowledge of the streams, hollows, and drainage lines, of the depth of water from the surface, and of the appliances and condition of each village community, sufficed for assessment purposes, local variations in the intrinsic quality of the soil being quite insignificant But in the Khádir the innumerable loops and channels of the old river-beds cause the quality of the soil to vary in the most capricious manner within very small areas, while in the Bángar the distribution of *reh* and swamp, depending as it does upon levels and drainages and the artificial obstructions caused by canal-cuts and the like, was no less arbitrary, and the degree in which the actual cultivation was affected varied from village to village with the style of cultivation adopted It therefore became necessary to inspect the whole area of each village in the most minute manner This I did, map and note-book in hand, often taking two days over a very large village But this inspection was made in varying seasons, and at

different stages of the season and while it fixed the relative condition of contiguous villages it gave me no general view of the Tract Accordingly just before the spring harvest of 1876 I made a tour through the whole Tract riding through every considerable block of cultivation under settlement and making copious notes as I rode I travelled over nearly 1 200 miles of ground mostly at a foot pace and thus obtained an admirable view of the whole Tract which was of the greatest value in assessing it

666 Assessment Circles —I have divided the Tract into the five circles of Nardak Karnal and Pánípat Khadir and Karnal and Pánípat Bangar for assessment purposes As it is a rule that assessment circles must consist wholly of conterminous villages it would have been impossible to further sub divide the Khadir and Bangar Tracts where the physical features vary almost from village to village without forming many small circles and I am of opinion that statistics referring to small areas are most misleading as any accidental anomaly in an individual village will materially affect the whole With regard to the Nardal however I think I should have done more wisely to separate the fringeing villages included in Class I of Statement No VII and form them into a separate circle as they present the peculiarities of the Nardak proper in only a very modified form Of course full allowance has been made for this fact in the detailed assessments The grounds for my assessment will be found in great detail in the printed Revenue Rates Reports for Karnal and Panipat It will suffice to give here the general outlines of the considerations which led me to my conclusions Statements Nos VI to XXI refer to this portion of the report

667 Rent Estimates —I have already explained that true rent is throughout by far the greater part of the Tract practically unknown But there are a certain number of villages owned by non cultivating proprietors such as original Musalmans the Mandals and the Skinners in which true rent is taken and which I shall call rent villages Unfortunately the Mandals and Skinners take in almost every case either a share of the produce or crop rates and these are of little use to us *The other rent villages in which cash or grain rates are taken* lie almost without exception close to the cities where cultivators and appliances are plentiful land valuable and competition keen I should add that fixed grain rents are generally taken for the best land and fixed cash rents often for inferior land

668 True rent being comparatively unknown the records of suits for rent are so few as practically to afford no information and the only available sources of information regarding rent rates are the patwaris yearly papers which though no doubt extremely inaccurate in detail give I believe a very fair general view of the

Rent Estimates

state of the village I have had the papers of 1870-71, the last which had been prepared before settlement, carefully abstracted for every village The results are given in very full detail in the appendices to my Assessment Reports, and are summarised in Statement No. XVI, grain rents being converted into money at the rate of 30 seers per rupee * I should explain that wherever the *amount* of rent paid was entered in the papers, the holding is shown in column 4 as paying fixed cash rents, but a reference to column 9 will show that in the great majority of these cases, the amount entered is merely the revenue and cesses paid by owners The table shows how inadequate a basis rent rates afford for the assessment of the Tract

669. But I was able to supplement these entries by my personal knowledge I have already said that true rent is gradually becoming more common, especially in the Khadir, and there are very many villages in which plots of land are let to new tenants at rates considerably higher than the revenue of the land I had also paid particular attention to the rates taken in Musalman rent villages, most of which are revenue free, so that the owners had no object in concealing their rental I therefore fixed what I thought were fair rent rates, as far as I could judge, for each kind of soil in each assessment circle In the Khádir circles they were based upon information of some completeness, in the other circles they were the merest estimates, but they were useful as checks, being fixed before the produce estimates were made out, and being quite independent of them Their average incidence on total cultivation compare with the average rent rates obtained from the papers as follows —

Circle	Rents obtained from yearly papers				My Estimated rent rates
	Rent villages	City	Other villages	Total circle	
	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p
Karnál Nardak	1 10 3		1 6 6	1 8 0	1 10 0
,, Khadir	3 3 10		2 13 7	2 15 4	3 10 0
,, Bangar	4 0 10	4 14 0	1 12 10	2 6 11	4 2 0
Panípat Khadir	4 1 0	4 14 0	2 11 0	3 10 10	4 13 4
,, Bángar	3 7 0		2 5 0	2 7 0	5 5 2

*The grain rents at page 32 of my Panipat Assessment Report have been headed maunds and seers by a printer's error They are really shown in money

Produce Estimates

Besides these rates I fixed an estimated rent rate for the Nardak pasture lands based upon very copious notes of the sums paid by neighbouring villages for blocks of pasture leased to them for grazing These estimated rates I shall in future quote as rent rate estimates The figures obtained from them are shown in Statement No XVII

670 Produce Estimates—In framing my produce estimates I had three *sources of information* *First came the experiments* as to actual yield of crops cut thrashed and weighed on the spot which I caused to be made to the number of nearly 3000 The experiments were made by the settlement officials who like all native Government officers felt it their duty to favour Government by selecting good crops and good land The results given by them are as a rule, too high

Secondly I had the entries of *yield in the patwáris yearly* papers where rent was taken in the form of a share of the produce I had the figures abstracted from 1856 to 1870 They did not give separate results for different qualities of soil and were as a rule far too low but the results were useful as a check.

In the *third* place I had the Skinner papers which I abstracted from 1853 to 1873 The system of rack renting adopted by the estate has impoverished the villages so that the results would in any case be below the average. But besides this there is little doubt that the yield is purposely understated as it is by these papers that the native agent accounts to his employer But the results were useful as a minimum standard

671 In reality I based my estimates chiefly upon the detailed results of the settlement experiments not accepting the averages resulting from them but freely using my judgment and not hesitating to discard the figures when I was of opinion that they were untrustworthy I had gone over many hundreds of field with owners of revenue free villages who had no object in deceiving me formed my estimates of the yield and then obtained that of my guide and I had seized every possible opportunity of acquiring information as to the yield of crops In my final tour mentioned in § 665 I had estimated yields and noted the figures as I went along and had had 67 typical fields noted by me cut to check my estimates the result being that the latter were somewhat too low but very fairly correct in relation with one another Thus I felt considerable confidence in my ability to form with the aid of the figures at my disposal an estimate which rough and approximate in the extreme as it and all similar general estimates must be should approach tolerably near a fair general average yield

Produce Estimates

672 Especially, I paid attention to a point in which, to my mind, lies the great difficulty of estimating average yields, and a want of due attention to which has probably been a principal cause of the proverbial uncertainty of these estimates I think the distinction between an average crop and average yield has not been always sufficiently recognised Take all the land of a certain class under a given crop, and, neglecting small differences, state each different rate of yield that is found to exist, and the average of these different rates will give you the average crop , but before the average yield can be obtained, the area on which each individual rate of yield exists must be taken into account For instance, taking a broader view of the matter, suppose that the rates of yield of a decidedly good, a fair medium, and a distinctly bad crop have been correctly estimated for *goira* and for unmanured soil these rates must be treated in very different ways to get the average yield of the two soils In the *goira* a bad crop will be a rare exception, and the fair medium crop will hardly occur more frequently than the distinctly good crop In the unmanured soil, on the other hand, the medium crop will be the commonest, the distinctly bad crop will be found on a very large number of fields, and the decidedly good crop will be comparatively infrequent Hence there is always a danger of over-estimating the yield of inferior soils , and this danger is enhanced by the fact that, in thinking of the average crop, one is apt to forget the many instances in which the crop has almost or altogether failed, and which do not present themselves to one's mind as instances to be taken into account, although they all enter into the area shown in the abstracts It is most important to remember that the inferior soil gets, as it were, the leavings of the agriculturist's labour It is the fields near the village and the well, the manured plots, the richer soils, which are ploughed oftenest and earliest, are sown first, and watered without fail The outlying unmanured fields are only taken up when the others have been thoroughly prepared , they are ploughed only as often as the demands of the other soil will allow , they are sown down to the very latest moment at which success is possible , they are watered only when the finer fields have been satisfied An agriculturist always sows more irrigated crops than he can ordinarily water successfully, so that he may take advantage of any peculiarities of season, and may select the crops best worth care Similarly there is always a certain area, the fag-end of the cultivation, which has been sown on chance If the season is good it will yield a very acceptable addition to the total outturn , if bad, it is hard if the seed, at any rate, is not recovered, while the labour expended was not great, and could not have been otherwise employed with a better result Besides these considerations there is the fact that labour and capital have been expended where their expenditure would yield the largest returns, so that the irrigated and manured soils are, as a rule, actually better in intrinsic quality, apart from the addition of water and

manure than the unirrigated and unmanured area Thus the dry unmanured *rausli* is by no means the same soil as the wet manured *rausli* minus wells and manure but includes all the worst soil in the circle and is not very much better than *bhur*

673 In the Nardak I had to modify very largely the estimated yield that I framed in the first instance from the results of my experiments and inspection—results obtained in a series of exceptionally good seasons I found from the district reports that between 1856 and 1875 out of 38 crops 16 had almost wholly failed Since last settlement 31 out of 60 had perished but as the full revenue is not demanded in a famine year I took the former period as the basis of my reductions and bearing in mind the peculiarities of the different crops and soils and their varying sensitiveness to drought modified my original estimates accordingly

674 In framing my estimates I excluded all fodder and crops grown purely for use as fodder as no share of these is ordinarily receivable by the landlord I framed no estimates for crops occupying less than one per cent of the cultivated area rating the ground occupied by them at the average rate given by the estimates for the remainder I allowed for the double cropped land by fixing the proportion between what the second crop might be expected to yield and what it would have yielded had it not been preceded by an autumn crop and applying it to my estimated yield for the soil and crop I obtained an estimate for the produce of canal land in its unirrigated aspect in a similar manner by estimating the proportion which the yield of an individual field to which water had been denied would bear to the yield of the same field if irrigated and by making assumptions as to the crops which if irrigation were stopped would replace those staples which cannot be grown without irrigation This estimate was of course hypothetical in the extreme Finally I fixed a rate for the Nardak pasture land derived from the rate of the grazing dues paid by the non cultivating villagers to the community of owners

675 The results of my estimates are given in Statements Nos XIII and XIV I think that in tahsil Panipat my cotton estimates were a good deal too high and those for *jawar* somewhat too low otherwise I believe the figures to be as fairly accurate as it is possible to make such estimates with the means at our disposal It must be remembered that it is the *detailed* estimates for the various soils and not the general results that must be criticised for the former alone are estimates for which I am responsible the latter being mere arithmetical results compiled from the former by the soil areas The general results show many apparent discrepancies which disappear directly the detailed estimates are examined To give one instance only The average yield of cotton is certainly higher in the

Bángar than in the Khádir for the same sort of soils, and my detailed estimates are always higher—in some cases double as high—in the former Yet the general result is, that the Khádir yield per acre is a quarter as great again as that of the Bángar, simply because in the former only one-sixth of the cotton, and in the latter three-fifths of it, is in unmanured soil

676 Share of produce taken as rent—To utilise the produce estimates for purposes of assessment, it was necessary to fix the share of the produce ordinarily recoverable by the landlord, and further to fix prices which, applied to that share of the gross produce, would give the estimated rental In the Khádir and Bángar circles the proportion taken by the Skinners is one-third on irrigated and two-fifths on unirrigated crops The people ordinarily take one-third throughout, but the Skinner rates are more truly rent rates, and I adopted them The reason that a larger share of the produce is taken on dry crops is, that they consist largely of fodder crops, from which the landlord receives nothing, and therefore takes more on the grain crops to recoup himself But in the Nardak the irrigated area is exceedingly small, the mass of all kinds of the crops being unirrigated The custom of the circle is to take one-fourth only, but irrigated or highly cultivated land is never let on these terms, and can well afford to pay a third, as elsewhere Thus my proportions are—

Nardak—	
Irrigated or manured	one third
Other land	one fourth
Other Circles—	
Irrigated	one third
Dry	two fifths

677 Ruling prices for agricultural produce.—It remained to fix fair prices which should represent the average value of the crops to the cultivator, and not what they would fetch if carried to the market-towns For this purpose the books of the Banyas in 14 of the largest villages in various parts of the Tract were examined, and rates for the past 20 years abstracted The rates obtained by the Skinners for their produce during the same period were obtained, as also the tahsil rates These are shown in detail in the appendices to my Assessment Reports By the help of these figures I fixed for each year and crop, not a mere arithmetical average, but what appeared to be a ruling rate, and applied the averages of twenty years to my produce estimates

678 In the Nardak, however, the rates of years in which the district reports showed that the crops had failed, were excluded so far as regards grains which the Banyas' books showed not to have been sold in those years For instance, for wheat, which is chiefly grown in irrigated land or in the less arid eastern portion of the circle,

Ruling prices for agricultural produce

only the four years of actual famine were excluded while eight years were excluded for gram the most universally grown of the Nardak staple, and the one most dependent upon the season. I remarked in my Assessment Report that in the Khadir and Bangar I had included the rates of famine year but I continued — This can be done without danger in tracts like the riverain and canal circles where the area ordinarily irrigated is exceedingly large and can be much extended in case of need where the crops are practically independent of rain and where therefore the enhanced price probably more than counterbalances the diminished yield in a year of drought where too the chief staples consist of portable products like cotton and *gur* or of a grain like wheat in which the export trade is yearly increasing. But in the Nardak where irrigation is hardly practised at all in the mass of the tract where the crops are absolutely dependent upon not only the quantity but the season of the rainfall and where rain is far scantier and more uncertain than in any other part of the district — where moreover the only staples which are not wholly consumed by the producers are grain such as coarse rice and gram for which the demand is purely local — I think it is out of the question to assume as a fair value for produce the average of the rates of 20 years in eight of which little or no grain was produced. I have therefore excluded those years in which the crop under consideration in each case failed and the detailed figures are submitted in Appendix VIII so that it may be seen exactly what I have done.

670 — The Punjab Government objected to this procedure and remarked that my process depended upon two assumptions—

First — That there was no produce in the excluded years.

Second — That the villagers sold all their produce in the years in which it was gathered so that they had none to sell in the years of non production.

Sir R. Egerton was of opinion that neither of these assumptions could be made, that it was unsafe to assume that the failure [illegible] of known scarcity had been so complete as to preclude the [illegible] of any large tract of country from participating in the [illegible] rise of prices and that the second assumption [illegible] correct and manifestly untenable.

I would venture to submit that the exclusion of [illegible] culating the rates for each staple was based [illegible] that the year was one of known scarcity but [illegible] with the absence of all record of sales [illegible] village books that is an almost [illegible] store more grain than he needs for [illegible] in his own house where he has [illegible] that he makes over almost the [illegible]

Banya, who credits him with it at the rates then current, and that in a year of drought the produce of the Nardak is, if we may judge from the experience of 1877 and the succeeding seasons, if not absolutely *nil*, at any rate so small that it does not nearly suffice to supply the food-consumption of the cultivators, who therefore, instead of having any surplus to sell at enhanced rates, have to buy more than they produce, and who therefore suffer from, instead of profiting by, the high prices which rule

680 The following are the rates adopted by me for the valuation of the estimated produce, expressed in seers per rupee

Staple	Nardak	Karnal Khadir	Karnal Bangar	Panipat Khadir	Panipat Bangar
Cotton	13	12	12	11	12
Gur		18	18	18	18
Maize	43	36	37	35	
Fine rice	41	35	36	35	34
Coarse rice	48	45	44		
Jawár	42	35	36	35	35
Bajra	35	29	29	29	29
Moth	39	34	34	34	34
Wheat	32	31	30	29	29
Gram	49	38	39	38	37
Barley		43	44		43
Wheat and gram	45	37	37	35	35
Barley and gram	50	42	43		40
Masúr		40			

The figures resulting from the application of these prices are given in Statement No XVII

681 Changes since last Settlement in the productive capacity of land.—The details of progress made since last settlement will be noticed when each assessment circle comes to be discussed But there are a few general considerations which may conveniently be discussed here In the first place, I would point out that

Changes in the productive capacity of land

other matters remaining unaltered an increase in cultivated area by no means justifies a proportional increase in assessment As a matter of course the best parts of the village area the fields nearest the village or the well and therefore the most accessible for manure are first of all broken up and the inferior portions are brought last of all under cultivation Thus the area brought under cultivation since settlement is very markedly inferior to that cultivated in 1842 This is especially true of a tract which was already fully cultivated in 1842 Thus in the Khadir villages most of the good soil had already been broken up before last settlement and much of the increase in cultivation which has taken place since then is due to the bringing under the plough *soil which under the name of* bhur *previous Settlement Officers* had described as barely repaying the labour of cultivation Again in the canal tract where the cultivated area has not actually diminished it

the Nardak on the other hand cultivation is still so scanty in proportion to the total area that although most of the lowest lying and therefore best land had been broken up before settlement yet on the whole the new area is probably very little if at all inferior to the old

682 And if the new area is generally less productive than the old it is no less true that in many cases the old area has also decreased in fertility Land i not cultivated year after year often with two crops much of it irrigated and comparatively little of it manured and that scantily without some degree of exhaustion The following figures show the extent to which these processes are carried on —

Assessment C cle	P c t ges f cult at d ea that a		
	D ble c pp d	Manur d	Ir gated
Nard k	1 6	6 2	11 9
I arn l Khádi	14 1	22 7	71 1
B ng r	0	1 6	77 4
P nip t Khád	16 7	31 9	84 8
Bá gar	15 5	2 0	77 3

And in the canal villages the evils which have rendered barren so large a proportion of the once cultivated area have at the same time enfeebled much of the remainder while the decreased area has rendered impossible any rest to the land Even in the Khadir where

cultivation has increased somewhat, population has increased much faster, and in many villages the cultivated area is too small for the needs of the people, often falling as low as 3 acres per adult male cultivator, one acre per agricultural soul, and half an acre per head of the village population Relief is in many cases obtained by cultivating the spare land of adjoining villages, but that relief must sooner or later be withdrawn, as the land is needed for the increasing number of proprietors, and in several villages the best land already shows symptoms of being overworked In the Nardak the large culturable area, and the enforced fallows due to periodically recurring droughts, have rendered any exhaustion of the productive power of the land by over-cropping impossible

683. Changes in the value of produce since last Settlement.—The prices of agricultural produce which ruled in the villages between 1830 and 1874 have been obtained from the Banya's books in the manner already described, and are summarised in the following table, which shows average prices in seers per rupee in the Pánipat tahsil

Period	Cotton	Gur	Maize	Rice	Jawár	Wheat	Gram	Barley
1830 to 1834	16	21	67	53	68	45	58	46
1835 to 1839	16	18	43	42	42	31	45	45
1840 to 1844	18	21	42	33	38	34	39	45
1845 to 1849	18	20	43	38	39	33	39	44
1850 to 1854	21	24	52	37	55	41	50	58
1855 to 1859	16	21	55	43	50	40	58	62
1860 to 1864	10	16	31	33	32	28	34	40
1864 to 1869	9	16	27	27	28	22	27	31
1870 to 1874	11	16	31	31	32	25	31	37

684 In my Assessment Report I wrote as follows —"Special circumstances have combined to render the rise in prices, which has been so general all over India, somewhat less marked in this district than elsewhere The large frontier cantonment which was kept up for so many years at Karnal created a local demand which its transfer to Umballa did not much diminish, and the populous city of Delhi is so near that the metalling of the Grand Trunk Road, always a good one, which was done about 1853, did not affect prices so much as new communications would do in an isolated tract The same thing may be said of the great mart of Shámli, to which the present road existed before last settlement, though doubtless it is better now than then Another cause which tended to keep prices up was the immediate proximity of the arid tracts of Hariána and the Bágar, the normal state of which appears to be scanty rain relieved by frequent droughts

Changes in the cost of production since last Settlement

The influence of this cause is often noted in the early correspondence but the extended use of canal water in these tracts has lately tended to equalise the local supply with the demand

The prices tell their own tale The first five yearly period is marked by the famine of 1833 the second by the drought of 1837 38 In the third, during which the settlement was made the rainfall was somewhat scanty throughout but the prices may probably be taken as the normal rates of the time as they tally with those of the preceding period and for the next five years remain almost unaltered although the seasons were favourable The supplies needed by the army operating in the Panjab between 1845 and 1847 were largely drawn from this neighbourhood The fifth period from 1850 to 1855 is marked by a sudden and extensive fall in all prices which continued to 1858, and this must I fancy have been owing to the opening out of the Panjab and to its surplus stuffs pouring into a market from which no railway existed to carry them away The famine of 1859 60 only introduced the cotton famine which began in 1861 and continued for five years during which time it is estimated that £63 000 000 sterling of silver was poured into Bombay This enormous addition to the circulation of the country drove up prices with a rush and before equilibrium had been restored the introduction of steam carriage from Delhi threw open the markets of the world to India and perpetuated the high level which had been reached The famine of 1869 created a temporary disturbance but for the last five years the seasons have been fair the opening of the Panjab railway in 1870 has completed the connection between Lahore and Bombay and prices have stood with an extraordinary steadiness at what may be considered their normal rates Since then the drought of 1877 80 has again raised prices considerably but the rise is probably only temporary Taking the periods from 1840 to 1845 and from 1870 to 1875 as giving normal rates for last settlement and *for the present time which I think we may fairly* do we find the rise in prices to be as follows —

	Wheat	Gram	Barley	Jawar	Rice	Cotton	Maize	Gur
Settlement rates	100	100	100	100	100	100	100	100
Present rates	1 6	1 6	1 1	119	106	163	1 5	1 1

And the general result may be said to be that prices have risen by about one quarter

685 Changes in the cost of production since last Settlement —So far as rise in prices affects the cost of living to the cultivator the proportional increase in the cost of production is of course no greater than the increase in the value of produce and the cultivators reap the full benefit of the enhanced value of the surplus But there

is little doubt that, in all other respects, the cost of production has increased far more rapidly than has the value of produce The price of cattle has probably doubled since 1840, at any rate that of the more valuable cattle which are needed for working the deep well and stiff soil of the Bángar and Nardak, and which are for the most part not bred at home And if the people are to be believed, the cost of all implements of agriculture has increased almost in like proportion The demand for fuel and the extension of cultivation have rendered the materials dearer, the enhanced cost of living has raised the price of labour, and the tendency which has so strongly marked our rule of late years to substitute contract for status and competition for custom has in some not inconsiderable measure relaxed the customary obligations which bind the village labourers and artificers to the communities among whom they dwell It must be remembered, too, that the extension of cultivation itself increases the cost of cultivation so soon as it encroaches upon the pasturage of the village, for it then necessitates the substitution of stall-feeding for grazing, and the devoting a considerable portion of the cultivated area to fodder crops which shall support the oxen needed to work the whole This stage has already been reached in a very large number of the Khádir villages, while in the canal tract *reh* has too often ruined every acre of grazing in the village Above all, in the canal tract, the price of water—that very important element in the cost of Indian agriculture—has increased since 1842 by 150 per cent The changes in the occupier's rates charged by the Canal Department are fully described in my Pánípat Assessment Report, and may be summarised thus —

Staple	Till 1854	1855 to 1867	After 1867
Sugarcane	100	60	250
Rice	100	120	300
Cotton	100	120	230
Maize	100	120	170
Jawar	100	100	250
Wheat	100	120	230
Barley	100	100	340
Gram	100	100	340

Thus in Pánípat Bangar the occupier's rates charged on the average crop areas irrigated between 1860 and 1870 according to the three sets of rates would be—

By the first set	Rs 67,383
„ second „	„ 71,394
„ third „	„ 1,64,341

686 Distribution of Produce.—The first point calling for notice in connection with the distribution of the produce is the increase of population which has taken place since settlement, and

Distribution of Produce

which is very much larger than the corresponding increase in cultivated area The detailed figures will be found in Statement VI The general results are as follows —

Assessment circle	Percentage of increase at date on	
	Cultivated area of 1842 47	Population of 185
Nardak	1	9
Karnal Khadar	4	30
Bángar	6	38
Panípat Khádar	9	41
Bangar	1	15

The census figures of 1852 for the Nardak represented only a portion of the population ordinarily resident as the drought had driven most of the young men away with the cattle or in search of labour and it is possible that the figures in general were not quite correct But there can be no doubt as to the broad fact that population has increased far faster than cultivation has extended and the sub division of fields and holdings shown below and the fact that the two ox has been substituted for the four ox plough as the unit of account tell the same tale.

Assessment circle	No of fields and holdings recorded at Settlement							
	Former Settlement				Present Settlement			
	Cultivated acres	Proprietary holdings	Cultivating holdings	Separate fields	Cultivated acres	Proprietary holdings	Cultivating holdings	Separate fields
Nardak	34,044	2 057	3 816	48 279	41 199	2 54	9 003	148 026
Karnal Khádar	7 89	1 434	3 72	7 59	30 002	2 285	7 860	56 359
Bángar	9 710	1 403	3 358	4 181	33 496	60	8 41	116 959
Panipat Khádar	58 467	4 986	8 6 3	73 120	61 068	6 334	44 685	144 571
Bangar	101 467	8 880	14,740	02 510	10 010	7 923	39 485	444 441
TOTAL	51 581	18 760	33 909	93 68	67 775	21 444	89 445	910 356

687 The tendency of over population to produce over cropping has already been alluded to But even before this stage is reached the revenue paying capacity of the people is affected The first effect of increase of population is of course to extend cultivation its second effect is at once to render possible and to compel the adoption of higher and more careful cultivation and so far the

Distribution of Produce

increase is beneficial, though the minute sub-division of holdings always tends to destroy the elasticity of the revenue-payer, by reducing the margin which can be made available in a time of difficulty, and by rendering a failure, when it does occur, more complete But in the India of the present day, at any rate, and in highly-developed tracts like our Khádir and Bángar, a point is soon reached when the extension and improvement of agriculture fail to keep pace with the increase in the number of mouths to be filled, and directly this point is reached, the surplus left over from the gross produce after defraying the expense of supporting the cultivator in the style to which he and his followers are accustomed, is encroached upon, and it is from this surplus that the revenue is paid

688 This question of over-population seems to me of the most pressing nature as regards tracts such as those under discussion The fact that many of the Bángar cultivators have, as injury from the canal reduced the culturable area of their villages, taken up land in Jínd, by the cultivation of which they supplement the revenue derived from their ancestral holdings, is one of great promise, and I am in hopes that, as soon as the new canal introduces irrigation into the Naidak, an outlet will be afforded for the surplus population of the lower lands, unless, indeed, it be closed by the antipathy between the Jat and the Rájput But the disinclination of the Indian peasant to leave his home permanently and take up his abode in a new neighbourhood is well known, and I fear that difficulty will be felt in the near future It is, in fact, already felt in not a few of the Jat villages, but the tract as a whole is not over-populated as yet, and the question so far arises only in the case of individual villages, though these are too often the finest and best With respect to these the Financial Commissioner, in his orders on my Karnal Assessment Report, clearly laid down that mere over-population should not be accepted as a sufficient reason for reduction of assessment, and it is clear that if it were, the revenue would, as our civilised administration interfered more and more successfully in the struggle for life, dwindle away, and eventually disappear altogether But the cases where, as has happened in one or two villages, the people have become involved owing to a lack of culturable land, and the means and style of cultivation, and therefore the amount of produce upon which the assessment is based, have suffered in consequence, are difficult to deal with At any rate the question of the proportion of population to cultivation is intimately connected with the extent to which it is possible to enhance the assessment

689. As regards the distribution of the produce between owners and tenants, I regret that I can give no really satisfactory information As already explained, so much of what we correctly show as land held in tenancy is really held by individual members of the proprietary body, either from the community as a whole or from other and wealthier members, that the figures are of scarcely any value as a basis for discussion This is specially the case in the canal villages, where

the inroads of *reh* have driven the people to break up any common pasture land that may have escaped which they hold of course as tenants of the village In such villages the area held in tenancy is often shown as having increased since last settlement while in reality all tenants that could possibly be ejected have long ago been got rid of This much is certain that a very considerable proportion of the cultivation is held by tenants who at present pay no rent to the owners and though the tenants are under existing circumstances as much revenue payers as the owners yet they are as a rule much poorer and hold much smaller holdings than the latter and it too often happens that in a famine year many of the tenants are unable to pay and the revenue falls upon the owners shoulders This is in fact usually the case in the Nardak where true rent is commonly taken in the shape of a share of the produce and where therefore the owner gets nothing from the tenant just when he finds it hardest to meet the Government demand on his own holding

690 Alienation of land since last Settlement —The statistics regarding alienation of land by sale since last settlement were compiled from the rough survey records before attestation and are very incomplete a large number of alienations being brought to light at final attestation which had not been previously recorded many of them dating from the drought of 1877 I did not feel justified in having fresh statistics prepared after attestation as the assessment reports had then been submitted and much time and labour would have been expended without any corresponding advantage The figures regarding mortgages are necessarily incomplete for in most villages it is thought a point of honour not to record a mortgage in the Government papers, and the mortgagees where they were residents of the village whether Banyas or landowners would not ask for a record of mortgages which both parties freely admitted to exist. The city Banyas are seldom had recourse to save as a last resort and I believe that when the mortgagor is honest and of fairly good credit the record of a mortgage is the exception These unrecorded mortgages are known as *khángi* or private and are exceedingly numerous in some villages especially between the richer and poorer landowners Such figures as I have been able to obtain are shown in Statement No XXVII but they fall far short of the truth The figures for permanent alienations exclude all land given or sold to relations whether in the male or female line or to members of the community and show only such land as is owned by people who cannot be said in any sense to belong to that body

691 Basis and nature of last Settlement —The instructions under which the last settlements were made were to take as the Government share two thirds of the net profit of the owners I am now instructed to take one half only that is to say one quarter less

Basis and nature of last Settlement

than formerly, and this reduction in the demand almost exactly balances the rise in prices which has taken place

692. I have already alluded to the difficulty attending any precise classification of soils, and given my reasons for not generally interfering in the process But the minute comparison of the figures of the two settlements which I had of necessity to make while framing my detailed assessments, has convinced me that the classification of soils adopted in this settlement, has been much less favourable to the people than that of the last settlement It is often the case that, in a village in which cultivation has increased since last settlement, a smaller area of *bhúr* is now shown than was then recorded, or where cultivation has decreased, a larger area of *dakar* This, of course, affects a comparison of the respective soil rates only of the two settlements, and not of the total assessments

693. In the old settlement, land lately thrown out of cultivation was assessed as cultivated It is, I believe, a recognised principle of Panjab settlements that such land shall not be assessed at all, except, of course, when its abandonment is intentional, or due to exceptional treatment It has not, as a rule, been assessed by me At last settlement, too, a very considerable rate was imposed on pasture, not so much in consideration of its value for grazing purposes, as because some part of it would probably be brought under cultivation during the currency of settlement It has been decided that future extension of cultivation is not to be thus discounted, and that pasture is only to be assessed when it bears so considerable a proportion to cultivation that its profits form a material element in the income of the owners

694 The amount of the cesses which are imposed in addition to the original revenue assessed has been enormously increased since last settlement The details are given below —

Nature of cess	Percentage on the revenue			
	1842 to 1856	1856 to 1872	1872 to 1878	New settlement
	Rs a p	Rs a p	Rs a p	Rs a p
Lambardars' fees	5 0 0	5 0 0	5 0 0	5 0 0
Patwaris' pay	2 0 0	{ 3 2 0* / 2 0 0† }	{ 3 2 0* / 2 0 0† }	4 4 0
Road cess	1 0 0	1 0 0	1 0 0	1 0 0
School ,,		1 0 0	1 0 0	1 0 0
Postal ,,			0 8 0	0 8 0
Local ,,			6 0 0	8 5 4
Total	8 0 0	{ 10 2 0* / 9 0 0† }	{ 16 10 0* / 15 8 0† }	20 1 4

* Nardak only † Other circles

Basis and nature of last Settlement

It may be said that it is my business to assess the value of half the net profits and to leave the cesses to the discretion of Government and this is no doubt theoretically true and would be practically applicable could we ascertain with absolute precision the amount of the net profits But this we cannot do The rent and produce estimates are at best rough checks and not the least important considerations that a Settlement Officer has to take into account in fixing his assessment are the amount of former demands the ease or difficulty with which they have been paid and the present condition of the villages which have paid them These considerations all important in assessing individual estates are almost as much so in fixing rates when it is proposed as here to take a higher assessment than the estimates give But to make the comparison of any value it is the *actual* burden that must be compared for if *ex gra* the condition of a tract leads one to the opinion that it can pay 10 per cent more than it has been paying and no more and the cesses are enhanced by 10 per cent the original demand must be left unaltered This aspect of the assessment is particularly important where as in Karnal the cesses are now double or more what they were at last settlement and where the principal enhancement (the local cess) has this year for the first time to stand the test of a bad season

695 Finally the general nature of the settlements which we are revising is a point which has to be most carefully considered Mr Edmonstone s assessments of 1842 though too high in the Karnal Khadir and though special causes have called for their reduction in the canal tract were real assessments based upon soil rates carefully worked out to give a fixed share of the estimated profits of the land But Mr Gubbin s assessment of 1847 was made on quite a different basis at least in the irrigated villages He deliberately set aside as too low the rates which were then being applied to the similar and neighbouring villages of Kaithal and which there resulted in an assessment so heavy that it was never even imposed and took as his guide the rates which had been used for the highly developed villages of the canal and Khádir tracts the result being that his assessment amounted to more than the whole value as estimated by the Mandals (an estimate he admitted to be worthless and excessive) of a rental to two thirds of which his demand should have been confined The revision of 1852 was almost nominal and need not be noticed In the revision of 1856 Mr Ross indeed framed rates based upon those used by Captain Larkins in Kaithal for an assessment which had to be reduced after a very short experience of its working But he deduced his rates by a wholly incorrect process (Assessment Report § 27) and when he had got them made no practical use of them as is evident from his village notes In reality he based his assessments upon the previous demand viewed in the light of the

Basis and nature of last Settlement.

existing condition of the village, his operations were a reduction of assessment, and not an assessment *de novo*, and he gave in each village just so much relief as he thought was absolutely necessary to save the village, and no more

696 The fact is, that an assessment which is worked down to by successive reductions has always a tendency to be high, as reductions are given grudgingly, and this is especially the case when the reduction affects the pocket, not of Government but of revenue assignees Mr Barnes, in his review of the revision of the Kaithal assessment in 1858, admirably says* —"Reductions were given with an open hand in the Government villages But there was some reluctance to deal with equal liberality with jagir villages In the first case we were giving away our own revenue, and had nothing to consult but the interests of the people In the second case, the Settlement Officer felt that he must also regard the interest of the jagirdars Formerly they had collected their rents in kind, and had realised by this process a much greater revenue than they could expect under our system of money rates Captain Larkin's jama, therefore, had materially abridged the income received by the jagirdars, and when this class had resigned themselves to the loss and began to consider the measure final, the Government resolved upon a still larger abatement of revenue in their own estates By equal justice the zemindars of the jagir villages were also entitled to the full benefit of the reduced rates, but as I have said before, the Settlement Officer was restrained by consideration for the jagirdar Wherever relief was really necessary, it was of course granted, but no interference was made without absolute necessity So perhaps, as a general rule, the jagir villages will show higher rates of assessment than our own possessions"

697 It must also be remembered that we have no satisfactory information as to the real working of the old settlement in the Mandal villages The Mandals collect their revenue, and do or do not appeal to Government for assistance to collect at their pleasure And Government interferes of its own accord, only when total failure of crops makes interference absolutely necessary Just before a revision of settlement the Mandals were naturally unwilling to draw the attention of the officials to the existence of balances in their villages, and after the announcement of the new demands, it was found that heavy balances dating from several years back had accumulated in several villages I have the Mandals' word for it that the revenue has always been collected irregularly and with difficulty, but this would probably be the case to some extent in the Nardak, however light the assessment might be The table on the opposite page shows how the present parganah of Karnal is divided between the Mandal villages settled in 1847 and the non-Mandal tract settled by Mr Edmonstone in 1842

*Settlement Report, Thanesar District, page 67.

Basis and nature of last Settlement

Constitution of Parganah Karnal

Name of p e sent Assessment C rcl	PRESENT CONSTITU TION				FORMEP CONSTITUTION											
					SETTLED IN 1847 1852 1856				SETTLED IN 1842							
	New P g nah Karnal				*Old Pa ga h Karn l*				*Old Pd lp t Kl ddr*				*Old P r lp t Bd*			
	No of ill ce	Tot l area	Culti at n	Re enue	N of ll ges	Total area	C lti at on	Peve ue	No f v ll ge	T tal a ea	Culti at on	Pevenue	N f v llages	Total area	Cult at on	R nu
Nardak	74	152 118	41 154	42 163	67	137 455	38 177	37 917	2	1 583	857	1 7 2	5	13 080	2 120	2 524
Kh d r	47	55 929	29 483	57 034	11½	14 541	7 698	12 770	33½	38 186	19 712	41 3 5	2	3 202	2 073	2 939
Báng r	32	66 354	32 844	59 973	15	8 708	15 402	29 371	3	2 114	705	1 932	14	35 532	16 737	28 670
Total	153	274 401	103 481	159 170	93½	180 704	61 277	80 058	38½	41 883	1 274	44 979	21	51 814	0 930	34 133

N t —Th th p l m y m t as d d n t tly g th th figu as fi lly t d

CHAPTER XXI.—THE ASSESSMENT—DETAILED DISCUSSION

698 The Nardak—Descriptive and Statistical —The general physical features of the Nardak have already been described in §§ 8, 9 *supra* Statements Nos VI to XIX show the statistics In Statement No VII, Class I includes the fringe of villages lying to the east and south of the circle, and bordering upon the Bángar , they are for the most part cultivated by Játs, comprise the whole canal irrigation of the circle, and have a better rainfall and water nearer the surface than the remaining villages These latter are shown in Class II, and constitute the Nardak proper, being chiefly cultivated by Rájputs, and entirely dependent upon rain The circle includes 63 villages, and an area of 152,085 acres, of which—

41,199	acres or	27 0	per cent	are	cultivated
92,500	,,	60 8	,,		pasture land
14,505	,,	9 6	,,		barren
3,881	,,	2 6	,,		occupied by village sites, roads, creeks, &c

Rájputs own most of the large villages and 51 per cent of the cultivation The Mandals hold 9 per cent more, and only 31 per cent is in the hands of Játs and Rors Four-fifths of the soil is *rausli*, mostly of a reddish tinge, and not so fertile as the blacker soils of the Bángar , the remainder is *dákar* *Bhúr* is unknown The depth of water from the surface varies from 30 feet in the extreme east to 140 feet in the extreme west , 75 feet is probably a fair average But at the greater depths irrigation is hardly practised at all, and even drinking wells are fewer than they should be Thus only 10 per cent of the cultivation is irrigated from wells, and that chiefly in the eastern villages Three per cent more is recorded as irrigated from the canal , but of this a full half has never received water since the famine of 1869, the canal failing to supply it even in the drought of 1877 , and only ½ per cent can properly be classed as irrigated The waters of the Chautang and Nai are also forced over the surrounding fields by dams built across them, and lifted from the dam-pool after the floods have subsided , but the supply is irregular and precarious, and, at its best, only affects a few villages Thus the crops are almost wholly dependent upon rain, which is eminently scanty and precarious, and for the annual fall of which 16 inches is certainly an unduly high average , while the infrequency of rain is even more harmful than the small total fall, for the small local showers which sweep down the river, and in a less degree the canal, and are so valuable to the husbandman, seldom extend to the Nardak The local formula used in addressing a Settlement Officer is truer than such formulæ usually are "*Ram barse to bas jáwen Nahín, to bole bole baithe rahen*" "If God

gives rain we prosper if not we sit still and hold our peace Since 1824 there have been seven real famines in the Nardak including 19 years viz 1824 26 1833 35 1837 38 1851 53 1859 61 1865 70 1877 78 Besides this the crops have failed with more or less com pleteness in 12 years or 1839 1840 1844 1845 1848 1850 1854 1858 1864 1866 1876 1879 Thus the rains have failed in 31 out of 56 years The use of manure is almost unknown in the Nardak proper as it is said to burn up the young plant in the stiff dry and imperfectly prepared soil Agricultural appliances were when the census was taken fairly sufficient for the rude agriculture practised but the cattle have suffered *terribly* in the late drought. The chief staples are jawár gram and coarse rice—the last entirely a rain crop and consequently very precarious These occupy 21 35 and 19 per cent respectively of the cultivated area and are supplemented by wheat occupying 5 per cent and cotton chiefly unirrigated occupy 3½ per cent. The cotton is of the poorest description the gram crop in really favourable seasons is su
sown thicl for fodder

The cultivation is of the roughest
clears away the bushes imperfectly
runs his plough carelessly over the field casts in the seed and leaves the rest to fate I have ridden over fields from which a crop had been cut not six months before and thought I was riding over jungle Even the Játs and Rors apparently find it pays them so far as regards unirrigated land to cultivate a large area in a slovenly manner rather than a smaller area with greater care The ravages of wild animals really very seriously diminish the yield in this circle as is proved by the miles of hedges constructed and the constant watching practised—see § 431 According to the present survey there are 1 5 cultivated acre for each soul dependent upon cultivation and 0 9 acre to each inhabitant of the villages the average proprietary holding is 16 - acres the average cultivating holding is 4 6 acres But there is of course ample room for expansion and though there is not much lowlying land left un cultivated yet there are thousands of acres still unbroken which are little if at all inferior to the mass of the cultivated area Of the culti vation 6 7 per cent is held in occupancy tenure at least 15 0 per cent is held in exceedingly small holdings by tenants at will many of whom pay no rent to the landlord 7 8 per cent is owned by the Mandal assignees of which more than a third has fallen into the hands of money lenders while 9 0 per cent of the land not held by Mandals is known to have been alienated to strangers Mortgages are almost unknown the land not being a sufficiently valuable security while many of the alienations have taken the form of free gifts to cultiva vators who were willing to settle in the village and bear their share of the common burden

The Nardak—Descriptive and Statistical

699 In a tract inhabited chiefly by Rájputs, and of which only 27 per cent is cultivated, while 61 per cent is pasture land, it will be readily understood that cattle-farming forms no unimportant element in the means of subsistence In the large Rájput villages, it may, in fact, be said that cultivation holds an entirely subsidiary position The people look upon the manual labour of agriculture as to some extent derogatory, while the proudest of them thinks it no shame to tend his herds, the yield of their field is eminently precarious, and only follows on the expenditure of labour and capital, while their cattle yield *ghi* and calves in the exercise of their natural functions Thus the Nardak Rájput's chief agricultural care is to secure a plentiful supply of fodder from his *jawár* fields The general area of the tract is a high flat slope from which the rain water runs off almost as fast as it falls, and what scanty grass does spring up, is eaten at once before it disappears under the burning heat of the sun But every village is situated on a drainage line of greater or less magnitude, and in the hollows, where the earth is protected by the shadow of thick *dhák* jungle, grass grows with great luxuriance, and is both pastured, and cut and stored for use in the hot weather The hedges, too, which surround the cultivation, generally enclose a good deal of uncultivated land, and large blocks are often fenced off as grass preserves (*bír*) In these spots a plentiful crop of grass is to be found in fairly favourable seasons Notwithstanding this, by the beginning of April the supply begins to run short, the pools in the jungle have dried up, and the mass of the cattle are taken away in large herds (*gol*) either to the *dúns* of the Siwáliks, or, where the existence of friendly relations with the villagers renders it possible, to the riverain and canal villages As soon as the first rains promise a supply of grass and water these cattle return, accompanied by the herds of the canal and riverain tracts which the rising floods have driven from their homes, and often by those of the arid tracts of Hariána, where the season has been less favourable Thus the cattle-farming capacity of individual villages depends, not so much upon the actual area of pasture land, as upon the extent to which that area is occupied by hollows and drainage lines Many villages are compelled to fall back for pasture upon neighbours who have a smaller but more favourably situated area, and in some villages considerable sums are yearly paid as grazing fees to other communities Besides cattle, a large number of sheep and goats are pastured in the tract, chiefly by the non-proprietary community

700. The rough agriculture and cattle grazing of the tract do not fully occupy its inhabitants, and they supplement the income derived from these pursuits in various ways The rice and gram crops, when they do not fail, are cut early, and as soon as the harvest begins in the canal and river villages, almost all the able-bodied males of the

Nardak move southwards to assist in reaping at the high wages to which the temporary demand for labour gives rise Their jungles too are a source of a certain small profit to the owners The flowers of the *dhák* tree are collected and sold as dye while the *dhakpache* are allowed to make incisions and to scrape off the gum which exudes on payment of a small sum The dead and fallen wood is taken to Karnal and Panipat for use as fuel for which however payment is seldom made to the villagers by the people who collect it but the surplus dung cakes which the large herds of cattle supply are largely sold for the same purpose

701 The Nardak—Historical and Comparative—Practically the whole of the Nardak is included in the Mandal settlement Mr Edmonstone only settling seven villages and 5 per cent of the cultivation A comparison between the figures of the old and new settlements shows that the cultivated area has increased since 1842 47 by 12 per cent on the whole having fallen off 4 per cent in the villages of Class I and increased by 19 per cent in those of Clas II but the result must be accepted with the greatest caution Mr Gubbins himself stated that his survey was most unsatisfactory but he attempted to rectify his figures only in villages where the excess or defect in area was unfairly distributed among the several holdings in all other cases roughly a his assessment I have fully disci my Karnal Assessment Report ɔins figures the villages of Class I city are held by Jats have a third of their cultivation irrigated and 8 per cent of it manured into which canal irrigation has been introduced since 1847 and in which irrigation has increased by 23 per cent while the number of wells has fallen off by only 6 per cent are shown as having lost 4 per cent of their cultivation since settlement while the villages of Class II which lie in the far Nardak are owned by Rájputs have only 5 per cent of their cultivation irrigated and 4 per cent manured in which water is almost inaccessible and canals unknown and which have lost nearly half their wells and 11 per cent of their irrigation since 1849 are shown as having in the same period increased their cultivation by 19 per cent is of itself sufficient to prove that there is something wrong about the figures And in the Nardal proper where the cultivation lies scattered about in patches among the jungle it is almost certain that a careless survey would show a smaller area as cultivated than was really the case

702 But if the old corresponding figures of th heavy rains of 1873 1874 a fall in September 1875 caused the area under cultivation during

The Nardak—Historical and Comparative

the survey of the Nardak to be larger than it ever had been before, and probably than it will be again for a very long series of ordinary years Land which had been out of cultivation for years was re-ploughed, new land was hurriedly broken up in every direction, and gram especially was sown broadcast over the tract I do not depend upon the statements of the villagers, or upon personal observation , but upon the universal consent of every body acquainted with the facts, including the Mandal themselves and their agents The area shown as cultivated was no doubt cultivated at survey , but it is far greater than the average area that has been, or will be, cultivated within a reasonable period Taking into consideration the fact that up till 1847 the Mandals had a direct interest in keeping up the cultivated area to a maximum, as their income under direct management depended upon it, while directly the demand was fixed the area under the plough became a matter of indifference to them , that cultivation was almost certainly diminished by ruinous over-assessment and unfavourable seasons between 1847 and 1856 , and that there have been since then two bad famines, I think it probable that there has not been any very large increase in the area *ordinarily* cultivated, though no doubt the area under crops during the last four years has been larger than at any previous time , and of the nominal increase of 12 per cent just upon half consists of land lately thrown out of cultivation, which is not ordinarily assessed

703 Nor can any very satisfactory comparison be instituted between the areas irrigated at the two settlements The bare figures show that the villages of Class I have lost 6 per cent of their wells, and have increased their irrigated area by 23 per cent, while those of Class II have lost 42 per cent of their wells and 11 per cent of their irrigation, the number of wells having decreased on the whole by 28 per cent, while the irrigated area has increased by 11 per cent The list of wells of last settlement would appear to be correct, it having been carefully tested in the present attestation There are now 282 broken down and useless wells in the Nardak, against 204 in use, and at least 89 of them have fallen out of use since settlement The irrigated areas of last settlement were considered by Mr Gubbins to have been very generally shown too small in order to deceive him in his assessments , and he used for assessment purposes an estimate based chiefly upon the number of wells And, as I shall show in describing the detailed assessment (§ 711), I found that, though all the land recorded by us as irrigated was no doubt rightly so recorded, yet the area so shown was far more than could be watered from the wells in any one year Thus but little weight can be attached to the comparison

704. The increase in population in the Nardak since 1852 is shown by the census to be 41 per cent in the villages of Class I, 93 per cent in those of Class II, and 79 per cent on the whole , while,

The Nardak—Historical and Comparative

since 1868 the former have lost one per cent and the latter gained 20 per cent giving 15 per cent total increase But as pointed out in my Assessment Report both censuses were taken in years of drought when a large part of the Nardak population leave their homes while my enumeration shows the number of ordinary residents There is however no doubt that the population has increased much faster than the cultivation but with such a large available culturable area as the Nardak villages possess no stress can be laid upon the fact and over crowding is wholly unknown

705 The *rise in prices has been already discussed* The increased cost of production due to the enhanced cost of cattle particularly affects the irrigation of the circle for which the strongest and most expensive cattle are needed Their increased cost and the terrible loss of cattle in the famine of 1869 and 1877 no doubt account in a great measure for the enormous number of wells which have been abandoned Of the 28_ that are broken down 133 are capable of repair did means or inducements to repair them exist.

706 The history of the circle of its early assessments and the two subsequent revisions and of the terrible famines which have swept over it have been already related under the heads of physical and revenue history The original assessment was simply monstrous the subsequent revision doled out relief grudgingly and very unequally their herds which form their mainstay have been twice decimated since 1858 and even before the last drought after a series of unusually favourable seasons the people were as officer after officer has described them at intervals from 1843 to 1869 impoverished and depressed In the latter year the Deputy Commissioner wrote as follow —

As regards the worst portion of the unprotected tract the Nardak containing the istamrár villages of the Mandal chiefs it must be observed that the zamíndars have not enjoyed equal terms as to assessment with those of similarly circumstanced khálsah villages These istamrár villages lying to the west of the Karnal parganah have never been in other than a depressed condition since they were made over to the Mandals in 1806 The collections were first made in kind by the chiefs who then exercised much oppression on the zamíndár To relieve them a settlement was made in 1847 but unfortunately such exorbitant demands were fixed that it had to be quashed only five years subsequently Khám management was then reverted to with all its attendant malpractices on the part of the istamrardárs A revised settlement followed in 1856 this was founded on the imperfect data of 1847 and though large reductions were made the assessment still remained much higher than that of similar khálsah villages The

Nardak Assessment

estates, upwards of 50 in number, have continued to remain in a very unsatisfactory condition, and yet the chiefs view with the greatest jealousy interference to assist the zamindars in seasons of drought by any suspension of revenue The fact is that the Mandal chiefs are mostly involved in debt, and are still practically foreign landlords, for they do not take a particle of interest in their estates I refer to these estates in particular, and from an early date, for in them the greatest distress has prevailed, and I consider it to be most fortunate that their settlements will shortly expire, for it is full time that further relief be granted to them I have known this part of the country off and on for the last 30 years, and know that the Bángar villages in the best of times are never in a flourishing condition"

707 Nardak Assessment.—Statement No XVIIIB shows the demand with and without cesses as it has stood at various times, the estimates framed at the present settlement, the assessment calculated at the rates proposed by me, and the actual assessment eventually imposed, together with rates of incidence per acre of cultivation and of culturable area, while Statements Nos XVII and XVIIIB show rates for the circle It will be observed that I have given relief to the extent of 16 8 or 19 3 per cent on the demand of 1876, according as cesses are or are not included, and that I have exceeded my produce and rent estimates, which, though prepared independently, agree with curious exactness, by 7 8 per cent, and the demand at sanctioned rates by 1 6 per cent—see also § 711 below The new demand is only 13 5 per cent below that of the revisions of 1856, if cesses as they stood then and now be taken into account I think the description given of the circle and its history fully justify the relief so afforded, and both the Financial Commissioner and the Lieutenant-Governor have formally recorded their opinions to that effect In a really fine season the crops of the Nardak undoubtedly yield the Government demand many times over, in years of actual famine some relief is given by remissions and suspensions But the demand has to be paid in the intermediate years even in seasons when not a field is sown, a considerable portion of the revenue is demanded, and the people are imprudent by race and often by religion And in a tract where, as here, the produce is a lottery, a fixed assessment that shall not ruin the people *must* be light The total incidence of the new demand is 14 annas on each acre of cultivation, which is 10 per cent higher than the incidence of the finally revised assessment in the neighbouring and similar villages of the Kaithal and Indri parganahs, and 4 annas 1 pie per culturable acre With cesses, the demand becomes Re 1-0-10 per acre on cultivation

708. The rates by which the detailed assessment was effected are shown in Statement No XVIIIA Land, the cultivation of

Nardak Assessment

which had been lately abandoned was excluded from assessment and this was especially necessary in the Nardak as the survey figures included a considerable area that was broken up for the first time in the exceptional seasons of 1874 75 and will probably not be cultivated again for years The area thus excluded is not quite 6 per cent of the whole cultivation On the other hand it was absolutely necessary to assess pasture as not only does it form a very substantial portion of the assets of the circle but the individual villages have adopted pastoral and agricultural pursuits in such varying proportion that it would have been simply impossible to neglect it in the detailed assessments At the Settlement of 1847 and 1852 a separate rate was fixed for flooded land Such land is very difficult to define the distinction was not made in my papers and as all *dakar* is more or less flooded I preferred to fix a separate rate for that leaving the amount of flooding enjoyed by each village to be taken into account in the detailed assessments In 1856 Mr Ross took the same rate for *dakar* and *rausli* as he held that the greater intractability of the former soil compensated for its advantages of position while the Kaithal Settlement Officer actually imposed the higher rate upon *rausli* But in an arid tract like this I think the lowlying land which receives all the drainage of the country and will often yield a crop when the rainfall is insufficient to produce anything in the high lands is distinctly the more valuable of the two and the people agree with me It will be noted that my rates are considerably higher than those given by my estimates that for irrigated land particularly so

709 The detailed assessments were made as follows all the five circles being treated in precisely the same manner I first took the villages in alphabetical order wrote my descriptive notes for each and roughly assessed them to the best of my judgment I then grouped them according to physical and other peculiarities placed them in order of quality within each group and had all important statistics the incidence of my proposed assessment and the relation it bore to current demand and to my rate estimates tabulated in the order of that grouping This at once brought into prominence inequalities and discrepancies in my rough assessment which had to be either justified or removed With these statements and my village notes in my hand I then discussed each village first with the patwari—and with the old patwari where there was one within reach—and then with the collected *zaildars* of the tahsil I then revised the assessment of each village after that I discussed each village with my Extra Assistant Settlement Officer Superintendent and Deputy Superintendent in committee and finally carefully went through the whole again two or three times over weeding out each time those villages about which I had finally made up my mind I also had the advantage

of personally discussing those assessments in tahsil Pánípat about which I felt doubtful with Colonel Davies, the Commissioner

710 The prosperity of a Nardak village depends almost wholly upon the amount of rain, nearness of well water, and proximity to the city—all of which elements are greatest in the east, and steadily decrease towards the west—with the amount of flood water which depends upon its position with respect to the streams and drainages, and with the caste of the owners I have also not hesitated to assess a very small village at a lower rate than a large village in similar circumstances, for the latter possesses far greater elasticity and power of tiding over bad times than the former Thus a small Rájput village on the extreme confines of the circle, and high above the Chautang basin, will be assessed at 25 per cent or more below revenue rates Villages in the Chautang and Nai basins are assessed 5 to 10 per cent, and those on the watershed between them, at 15 to 20 per cent below revenue rates, while in Ját villages on the steps leading to the Bangar and near the city the demand rises to 30, 40, or even 50 per cent above rates Finally, I have not hesitated to assess villages held by wealthy Banyas and the like, who have purchased them from the Mandals, higher than I should have done had they been held by villagers, for the owners of the former do not find their resources crippled by a bad year, are not in a depressed condition, and can fairly be assessed on the full average profits of the varying season, while the remarks of the Financial Commissioner in revising my Karnal Report, that " tracts like the Nardak cannot be assessed so nearly up to the true average half net produce as other tracts in which the variations of burden are less extensive," applies to the village communities and not to wealthy capitalists

711 One difficulty I found in applying my rates As I have already explained, all land ordinarily watered from a well was recorded as irrigated, and an estimate was made of the area which the well could fully irrigate in any single year On the whole circle, these two areas agreed fairly well But when I came to examine the figures for each village, I found that whereas, for instance, in a village with water at 90 feet the capacity of the well was entered at 10 acres and the actual area irrigated was only two acres, irrigation not paying at that depth, in villages nearer Karnal where wells are most numerous and water is only some 35 feet deep, the capacity of a well would be 15 acres, while 20 acres would be entered as irrigated, the individual fields being watered in annual rotation Now it was only possible to assess the two acres in the one case and the 15 acres in the other at full irrigated rates, and thus the revenue rates demand, corrected for this error, was reduced from Rs 33,497 to Rs 31,730 My assessment is 1 6 per cent in excess of the former, and 7 3 per cent in excess of the latter amount

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Panipat Khadir—Descriptive and Statistical

712 My detailed assessments amounted to Rs 30 040 My demands were all accepted without demur The Mandals have appealed from the assessments of 31 villages but the appeals have not yet been decided The Financial Commissioner and Lieutenant Governor have admitted the necessity for the reduction I have given the distribution over the villages has been made with the most anxious care and I do not think the assessments are unduly low Map No XI shows their incidence upon the cultivation and map No X the relief given The rates were accepted by the Financial Commissioner in his Nos 24 S C of 21st June and 7-C of 21st July 1879 and by Government in its No 1290 of 4th December 1879 The detailed as essments were sanctioned by the Financial Commissioner in his No 484S of 20th January 1880

The settlement is for 30 years dating from the autumn harvest of 1287 Fasli

713 Panipat Khadir—Descriptive and Statistical —The general physical features of this circle have been described in § 7 *supra* Statements Nos VI to XXI give the statistics The circle includes 74 villages with a total area of 106 588 acres of which—

61 068	acres o	57 3	per c nt re lt t d
31 675		29 7	p t e l d
8 087		7 6	b
5 761		5 4	occ p ed by illage tes oads creek &c

Játs hold 38 per cent of the cultivation Tagas 10 per cent while the remaining 52 per cent is in the hands of Gujars Saiyads Mughals Bairágis and similar slovenly cultivators *Dákar* and *bhur* each constitute 7 per cent of the cultivated area the remainder being *rausli* The soil is light and easily worked throughout the circle but varies much in quality being exceedingly good in many of the Jat villages towards the south and extreme north and little better than sand where the old river beds have cut up the country But in the Khadir more than in any other part of the tract the soil may almost be said to be made by the cultivators the yield in this light soil being to an unusual degree dependent upon the style of cultivation even more than upon the intrinsic quality of the land At their best the crops are splendid but on the whole the soil is of only average fertility Heavy rains often destroy the crops in the lighter soils by washing out the roots of the plants and a good deal of this area is liable to destructive floods when the river rises not only on the banks of the main stream but also along the old channels which fill from the flood water

The average rainfall is about 21 inches and small showers are more frequent than in other parts of the tract

Panipat Khadir—Descriptive and Statistical

Water is on an average 15 feet, and seldom more than 20 feet, from the surface, and the Persian wheel affords ample irrigation at a minimum expenditure of labour. Temporary wells are also dug in the spring at a nominal cost, which afford a certain amount of water, but they never last more than the season, and often fall in just when most wanted. In many villages the sub-soil is too loose to admit of their construction. Of the cultivated area, 71 per cent is irrigated from brick wells, and 11 per cent from temporary ones, while the canal irrigates 3 per cent, which lies wholly in the city of Panipat. The wells are very fairly equal to the task of watering the area recorded as permanently irrigated, which gives 15⅓ acres to each wheel. There is an adult male cultivator for every 5 acres, and one for every 3½ acres, and not quite five oxen for each wheel on a permanent well, leaving none for the temporary wells. The cattle are therefore not sufficient for the irrigating appliances, and the deficiency is still greater since the drought of 1877. The cattle epidemic of 1869 materially crippled the whole district in this respect, but the deficiency is most marked in the Gújar villages. In them, too, the cultivators are insufficient to properly till the area under the plough, as the Gújar always breaks up more land than he can manage. Twenty-eight per cent of the cultivation is manured. The principal staples are jawár, wheat, and gram, which occupy 18⅓, 33, and 14 per cent of the cultivated area respectively; they are supplemented by cotton, maize, and sugarcane in 7, 4, and 3 per cent respectively. The gram is largely grown in double-cropped land, and is always poor; and the unirrigated wheat, which constitutes 6 per cent of the whole, is, for the most part, grown in inferior soil. The people double crop 16½ per cent of the whole area. Nothing could be finer or more careful than the cultivation of the best Jat villages, but the Gújar cultivation is careless and bad. The Tagas occupy an intermediate position. The proportion of cultivation to population is small, and in some of the best villages so small as already to have produced distress. On the whole, there are 1·6 cultivated acres for each agriculturist, and 0·9 acres for each villager. The average proprietary holding includes 9·6 acres, the average cultivating holding 1·4 acres. The room available for expansion cannot be measured by the total area of pasture. Not only is much of this so poor as to be only technically culturable, but it is very unequally distributed, some of the villages on the river bank having considerable *jhao* jungles, and those on the Bángar border comprising considerable areas of pasture above the bank, while many of the finest and most populous villages in the centre of the circle are without grazing, and practically have no room for further expansion. Of the cultivated area, 4·4 per cent is held in occupancy tenure, while *at least* 11½ per *cent more is in the hands of tenants*-at-will, who, as a rule, pay little or no true rent, and is divided into exceedingly small holdings. The alienation figures available are given

in Statement No XXVII strangers hold 4½ per cent of the cultivation The figures for mortgages as explained in § 690 do not represent the true state of affairs

714 Panipat Khadir—Historical and Comparative —The whole of this circle was settled by Mr Edmonstone in 1842 Since then cultivation has increased by 12 per cent in Ját villages and by 9 per cent in the whole circle But as already remarked the increase has chiefly consisted in bringing inferior soil under cultivation while in some of the best soil symptoms of exhaustion are here and there beginning to show themselves Moreover a not inconsiderable part of the increase of cultivation lies in one or two villages where the extension has been so great that it will be impossible to enhance the demand proportionally The irrigation including that from temporary wells has increased by 12 per cent on the whole the increase being largest in Gujar villages where temporary wells are most used but the number of brick wells has increased by 13 per cent so that permanent irrigation has probably been substituted for temporary to a considerable extent The village population is now 41 per cent larger than it was in 1852 if the census figures are to be trusted and has increased by 9 per cent since 1868 The figures of 1852 are probably too low but there can be no doubt that the population has increased far more rapidly than has cultivation The increase in the number of proprietary holdings from 4 986 to 6 334 and the substitution of the 2 ox for the 4 ox plough as the unit of account point to the same conclusion The rise in prices and the increased cost of production have already been discussed The latter so far as the price of cattle is concerned affects the Khádir less than any other circle as the lightness of the soil and the nearness of water allow the use of inferior animals which are commonly home bred and which have not risen in price to the same extent as the more valuable class of oxen But the keep of cattle is a very important element in the cost of Khádir cultivation grazing land being so scarce and much of the pasture so poor that stall feeding has to be very largely resorted to

The fiscal history of the circle has already been described The assessment of 1842 was an extremely fair one famines have not permanently injured the well irrigated Khadir save in so far as the grass famine of 1869 and 1871 have reduced the stock of plough cattle and the people of the tract are in general fairly prosperous Relief was needed by many of the Gujar and some of the Jat villages but not in any large degree while some of the Gujar villages and many of the Ját villages were able to pay considerably more than they were paying

715 Panipat Khadir—Assessment —Statements Nos XVII XVIIIA and XVIIIB show the various rates assessments and esti

Panipat Khadir—Assessment

mates for this circle It will be observed that I proposed an assessment which would have enhanced the current demand by [illegible] per cent, and would have been considerably in excess of my rent and produce estimates The Commissioner, however, reduced my proposals so as to correspond more nearly with my produce estimates, though he left them still considerably in excess of the rent estimates, and the reduction was approved of by the Financial Commissioner and by Government The actual assessment enhances the current demand by [illegible] or [illegible] per cent, according as cesses are or are not taken into account, and increase the burden of revenue and cesses as assessed in 1847 by 119 per cent The incidence per cultivated acre is Rs [illegible] against Rs 2-1-5 at last settlement and Rs 2-6 9 of the current demand, but cesses raise the incidence to Rs 3, which is the highest rate at which an assessment has yet fallen in this circle The rates by which the detailed assessment was arrived at are shown in Statement No XVIII The area of pasturage is so small that it was excluded from assessment It was directed, also, not to assess the small area of lately abandoned cultivation which formed not quite one per cent of the whole cultivation I had proposed three separate rates for irrigated soils, not so much based upon the intrinsic values of the soils, as intended to arrive at a differential assessment on the various qualities of *rausli*, by imposing a very high rate on *dakar* which is usually accompanied by good *rausli*, and a very low one on *bhur* which generally carries with it *rausli* of inferior quality Colonel Davies, however, pointed out very justly that the rates thus framed would be misleading to other officers who might have occasion to refer to them, while the distinction in quality could easily be taken into account in the detailed assessments Accordingly, a single rate was fixed for all irrigated land Land irrigated from temporary wells only was treated as unirrigated, as the wells may or may not be made, do not last six months, and afford a poor supply of water at the best But their existence and the possibility of making them was taken into account in assessing individual villages An exceedingly low rate was imposed upon unirrigated *bhúr*, for this includes all the vilest land in the circle, much of it being barely culturable and only sown in good seasons, and the yield of all of it being precarious in the extreme I may remark that my rent rates tend throughout to be too high for the poorer soils, as they are mainly deduced from rates prevailing near the city, where competition is keen, and where soils are cultivated which in the villages would often be refused at any rent On the other hand, the produce rates tend to be too low for the poorer soils, as they exclude fodder crops, which are largely grown on such soils The rates finally fixed were, with the exception of that upon *bhur*, considerably higher than those of last settlement, while, as already remarked, our classification of soils is much more severe than that of 1842

Karnal Khadir—Descriptive and Statistical

716 My detailed assessments were made in the same manner as in the Nardak great attention was paid to caste it being simply impossible to assess a Gujar village at the same rate as a Jat village and in fact the produce of the former *cæteris paribus* is much smaller than that of the latter The new demands were accepted without demur except in three or four villages who only engaged after great hesitation and on being distinctly given to understand that farmers would be resorted to in case of refusal Two of these in which an enormous extension of cultivation had been treated very leniently and progressive demands fixed appealed unsuccessfully The four divisions of the City of Panipat also appealed but their appeals were dismissed The owners of two small plots of land close to the city which formed separate villages appealed and obtained reductions of assessments amounting to Rs 5 and 10 respectively I had proposed progressive assessments in the two villages abovementioned and in four other villages where the people were temporarily depressed owing to special circumstances Under instructions from the Financial Commissioner the Commissioner reduced the period of the initial assessment from 10 to 5 years in the two villages which appealed and slightly modified the assessment in two of the others Map No XI shows the *incidence* of the assessment and map No X the relief afforded on enhancement made The rates were fixed by the Financial Commissioner in his Nos 215 of 4th March 1878 and 1034 of 21st February 1879 and approved of by Government in its No 1172 of 30th October 1879 The detailed assessments were sanctioned by Financial Commissioner in his Nos 3154 of 29th April 1879 536 of 11th July 1879 and 466 of 20th January 1880

The settlement is for 30 years dating from the autumn harvest of 1286 F

717 Karnal) I
general physical feat
Statements Nos VI
villages comprising an area of 55 912 acres of which—

30 002 c s o	53 6 pe c	t re c lt ate l
15 84	28 4	p t e l nd
7 010	1 5	b e
3 058	5 5	p d by v ll e tes r ads tanks &c

In respect of the caste of the owners this circle is perhaps worse off than any other part of
the cultivation nor
ing 35 per cent an
The soil is generally of the same order as that of Panipat Khadir but it is more uniform in quality and that quality is markedly inferior Really good soil is only found in a few Saiyad and Taga villages on the Panipat border while sandy plains (*thali*) are numerous and extensive Thus *bhur* constitutes 9 per cent and *dakar* 10 per cent of

Karnal Khadir—Descriptive and Statistical

the area, the remainder being *raush*, for the most part of inferior quality Of the *dakar*, a great part lies in the Bángar land included in the villages on the border of the two circles, and is almost entirely unirrigated The northern portion of the circle is terribly cut up by old river channels, one of which is used as a canal escape, and great injury from *reh* and soakage has resulted, while the river floods very destructively 11 per cent of the cultivation The annual rainfall averages some 26 inches, and local showers are comparatively frequent Water is ordinarily 15 to 20 feet from the surface The canal at present irrigates 6 per cent of the cultivation, lying entirely in the northern portion, and much of it swamped, but I understand that canal water is, for the future, to be denied to at any rate a portion of this area Brick wells irrigate 64 per cent, and temporary ones 4 per cent of the cultivation, but the permanent wells cannot water more than 72 per cent of the area recorded as irrigated in any single year Eight per cent is naturally moist, but this consists, for the most part, of sandy soil by the river edge, from which the flood-water does not recede in time for the land to be properly prepared, while weeds spring up in such numbers that the yield is usually much smaller than in dry soil of a similar quality The appliances are exceedingly scanty There is, even including the Saiyads who do no work, only one adult male cultivator for every six acres, or fewer than in any other circle, while there is not quite one ox for every four acres, and only five for each wheel on a well—a somewhat scanty allowance The appliances in the Ját and Ror villages are ample, but this only render the deficiency in the other villages more marked Eighteen per cent of the cultivation is manured The principal staples are wheat, gram, and jawár, which occupy 35, 18, and 11 per cent respectively They are supplemented by cotton in 6, maize in 5, and barley in 4 per cent, not 1½ per cent is under sugarcane Eighteen per cent is double-cropped The cultivation is immensely inferior to that of Pánípat Khádir, as might be expected from the caste of the cultivators For each soul of the cultivating population there are 1 8, and for each inhabitant of the village 0 9 cultivated acres These figures are slightly larger than the corresponding ones in Pánípat Khadir, but in a few of the Jat and Ror villages the pressure of population is even greater than in that circle The average area of a proprietary holding is 13 1, and of a cultivating holding 3 8 acres My figures show one-third of the culturable area as still uncultivated—a proportion which falls to one-sixth in Ját and Ror villages But a glance at map No I will show that all the uncultivated land lies to the west of the Khádir bank, and therefore really in the Bángar circle, and is confined to a small number of villages It lies on the water-shed, is poor in quality, far from the canal and the river, and the water is at a considerable depth In the majority of villages there is hardly an acre that is not under the plough, unless it be *jháo* jungle on the river bank, or a patch here and there of

Karnal Khadir—Historical and Comparative

almost pure sand It is practically no exaggeration to say that there is no room for further expansion in the greater part of Karnal Khádir Of the cultivation 89 per cent is held in occupancy tenure while tenants at will paying except in the Saiyad villages little or no rent hold at least 23 per cent area in extremely small holdings The figures for alienation of land are given in Statement No XXVII They compare very unfavourably with those for the corresponding Panípat circle. Strangers own 6.5 per cent of the area while mortgages are extensive though but seldom recorded

718 Karnal Khadir—Historical and Comparative—About a quarter of the circle was assessed with the Mandal estates the remainder was settled by Mr Edmonstone in 1842 In the former villages cultivation shows a merely nominal increase since settlement while in the whole circle the increase is 4 per cent But against this increase must be set off a deterioration in average quality the river having in the south of the circle where the land is best cut away many hundreds of acres of good land with the masonry wells from which they were watered and left in their place stretches of sand which though cultivated in part afford a small and uncertain yield The damage in the north from the canal also dates since settlement and swamp and *reh* are still spreading year by year On both these accounts considerable reductions of assessment had already been made A great part of the increase in cultivation moreover was confined to two or three large Rájput and Gujar villages where a proportionate enhancement was quite out of the question The figures show an increase of 7 per cent in the irrigated area which is wholly confined to the Ját and Ror villages and is partly due to the extension of canal irrigation which is now to be reduced In the villages settled in 184- an advance of 3 per cent has been made and as already remarked the figures of 1847 cannot be trusted But the quality of the irrigation has altered as well as its quantity The number of permanent wells has fallen off by 3 per cent and while no part of the irrigation was temporary at settlement 6 per cent of it is now from temporary wells This fact is of weight in a tract like the Khádir where irrigation is so important. The proportion of the area double cropped is greater and that manured smaller than in Pánípat Khádir The population is here also increasing much faster than the cultivation the *increase since 1852 being 30 per cent according to the census figures* while the number of proprietary holdings has increased from 1 434 to 2 285 The remarks on prices and cost of cultivation in Panípat *Khádir apply equally to this circle also*

719 The fiscal history of the circle has already been related The settlement of 1842 was not so successful here as in the more southern part of the Khádir as sufficient allowance does not seem to have been made for the general inferiority of the northern villages,

Karnal Khadir—Assessment

and the assessment was very distinctly too high The assessment of 1847 was really oppressive, and in both very material reductions had to be made during the currency of settlement But no general revision was attempted in the greater part of the circle, reductions are made in isolated villages, only when the estate wholly breaks down under the burden of the Government demand, and the pressure of the general over-assessment, of which such estates are but the capital instances, remained unrelieved The Ját and Ror villages were, as a rule, fairly prosperous, except where they suffered from a lack of land, but most of the other villages were impoverished, many of them very greatly so, while the assessment on one or two of the largest and originally the finest villages, which had suffered most from diluvion and floods, was simply inordinately high, and relief was urgently needed

720. Karnal Khadir—Assessment—Statements Nos XVII, XVIIIA, and XVIIIB show the various rates, demands, and estimates for this circle My original proposals were sanctioned as they stood It will be observed that I have given a reduction upon the current demand of 4 4 or 8 7 per cent, according as cesses are or are not included, and that my demand is a little above that at sanctioned rates, below my rent estimates, and 2 7 per cent above my produce estimates I have been led to reduce the burden in the face of an extension of cultivation, because the present demand has been arrived at by a series of reductions given grudgingly, and only in individual instances, upon an original assessment which has proved to be too high, because the inroads of the river have materially altered for the worse the quality of the soil since settlement, and now render the yield over a considerable portion of the cultivation small, and, what is worse, uncertain, and because the swamp and *reh*, which are on the increase in the north of the circle, call imperatively for *ample* relief if the estates are not to break down entirely before the advance of the evil, as so many have already done in the canal tract The incidence of the new demand upon cultivation is Re 1-12-11 against Rs 2-3-7 at last settlement, and Rs 1-15-8 of current demand Cesses raise the incidence to Rs 2-2-11 against Rs 2-4-7 of current burden

721 The soil rates on which the detailed assessments were based are shown in Statement XVIIIA The area lately thrown out of cultivation only forms 2 per cent of the whole, and this, as well as the pasture land, has been excluded from assessment The naturally moist land includes all that poor sandy soil on the river bank which suffers so severely from the floods, the yield is extremely small and uncertain, and it has been of necessity rated low, in fact, I am not sure that I rated it low enough Moist *dákar* is much the same as dry *dákar*, as all *dákar* is more or less moist, and the areas of this and of dry *bhúr* were too small to call for separate rates The irrigated rate may seem low, but it must be remembered that a

Karnal Khadir—Assessment

quarter of the area recorded as irrigated goes dry every year so that my rate on land actually irrigated each year is Rs 2 7 thus —

Recorded as irrigated	4 acres, @ Rs 2	= Rs 8 8
Unirrigated each year	1	1 4 = 1 4
Leaving really irrigated	3	@ Rs 2 7 = Rs 7 4

The whole rates and general incidence are very low as compared with those of Pánipat Khádir but the following figures go far to justify the difference —

Percentage of cultivation	Panipat	Karnal
Permanently irrigated	74	68
Temporarily	11	4
Manured	32	22
Cultivated by first class cultivators	48	18
Cultivated by owners	64	5
Under sugarcane and cotton	10	7

Add to these figures the fact that 12 per cent of the Pánipat cultivation is city land while there is no city in Karnal Khádir that there is no single village in Karnal which can *compare* in any respect with some dozen or more villages in the south of Pánipat that one fourth of the irrigated area goes dry each year in Karnal and that *reh* and swamp and flooding work yearly mischief while all these disadvantages are almost entirely absent in Pánipat and I think the discrepancy between the rates proposed for the respective tracts will be explained

So again the rates are much lower than Mr Edmonstone s rates of 1842 but it must be remembered that the latter were framed for the whole Khádir including the Pánipat villages and Mr Edmonstone showed his appreciation of the fact that the rates were too high for the villages now under consideration by fixing an assessment very considerably under that which they gave Thus in the villages now included in Pánipat he increased his revenue rate assessment from Rs 1 45 385 to Rs 1,49 290 while in the villages now under discussion he reduced it from Rs 52 026 to Rs 48 125 So again the old Karnal rates are those used in the original assessment the subsequent reductions in which were made in the lump without any new rates being fixed

722 The detailed assessments were framed in the manner already described Relief was given especially to those villages which had suffered from river action which were liable to flooding and in which *reh* and swamp had done harm Some of the south western villages

which included large areas of exceedingly sandy soil, and one or two populous villages which had been partly paying an assessment too high for the lands of their own village out of the proceeds of their cultivation in neighbouring estates, have been relieved The new assessments were engaged for by all the villages and without hesitation, except in the case of two or three large estates in which the demand had been very considerably enhanced, though not nearly in the same proportion as that in which their cultivation had increased One of these villages, owned by Gújars had been steadily accumulating balances for some time in order to impress me with the severity of its assessment, and it is now in very serious difficulties, but on it I know that my assessment is light The Mandals have appealed against my assessment in nine villages, and Mr Skinner in one small village, but the appeals have not yet been decided Map No XI shows the incidence of the detailed assessment, and map No X compares the new with the old demand The rates and assessments were sanctioned in the correspondence quoted in § 712

The settlement is for 30 years, beginning with the autumn harvest of 1287 F

723 Panipat Bangar—Descriptive and Statistical—The general physical features of the circle are described in § 10 *supra* Statements Nos VI to XXI give the statistics, the several villages being included in Classes I, II, III, or IV of Statement No VII, according as *reh* has destroyed more than 75, more than 50, more than 25, or less than 25 of the total culturable area in each Land lately thrown out of cultivation has been excluded in those statements, because, as noted further on, it has been finally abandoned in this circle, while in the other circles it can and will be cultivated again The circle includes 91 villages, and its total area is 189,425 acres, of which—

98,963	acres or	52 4	per cent	are	cultivated
3,047	,,	1 6	,,	,,	lately abandoned
33,509	,,	17 7	,,	,,	pasture
33,825	,,	17 8	,,	,,	barren by reason of *reh*
10,636	,,	5 5	,,	,,	swampy or under water
3,820	,,	2 0	,,	,,	barren from other causes
5,625	,,	3 0	,,	,,	occupied by village sites, roads, &c

Játs own 54 per cent of the cultivation, Rors 18 per cent, and the Skinners 7 per cent, while Rájputs, Gújars and the like hold the remaining 21 per cent

Bhúr is almost unknown, *dákar* constitutes 14 per cent of the area, and 84 per cent is fine stiff *rausli*, for the most part of the very first quality, and when not injured by *reh* or swamp, yielding the most splendid crops to careful cultivation At the same time the amount of the yield is not nearly so dependent upon the style of cultivation as in the lighter Khádir soil, though, of course, additional care and labour produce their effect here as elsewhere The soil on the watershed and on the high Jínd border is lighter and often somewhat inferior

Panipat Bangar—Descriptive and Statistical

The rainfall averages some 20 inches but a drought, so long as it does not destroy the grass upon which the cattle depend is an almost unmixed boon to the canal cultivator and the people still look back to the famine of 1859 as the year when they cleared their banking accounts On the other hand seasons of heavy rain such as we had from 1872 to 1876 work terrible havoc in many of the low lying and swampy villages. The water is some 30 feet deep on the watershed and 60 to 90 on the Jind border But near the canals it is often only 2 to 3 feet from the surface and as the people put it they can draw water without a rope. Only 5 per cent of the cultivation is irrigated from wells lying almost wholly on the high lands out of reach of the canal The rope and bucket are invariably used Temporary wells can not be dug owing to the soakage from the canal The figures show 72 per cent as irrigated from the canal but this includes all land which is ordinarily so irrigated The canal figures for actual irrigation which include twice over not only all land watered in both seasons but all land in which irrigated rice is followed by an unirrigated spring crop have only four times reached the full area recorded as irrigated—namely in 1860 1866 1868 and 1869 and the average area shown by them for the 11 years from 1865 to 1875 is only 83 per cent of the recorded area. The greater part of this irrigation is ordinarily watered by flow but the area irrigated by lift increases large ly in dry years Great distress is often caused in the higher villages by the failure of the water supply The provisions for the escape of surplus canal water being quite insufficient the head needed to irrigate these villages can only be kept up when the whole tract is taking a full supply for irrigation purposes and thus the water often fails in the middle of the season while the full rate still has to be paid But the villages so situated as to suffer in this manner are not numerous

There is an adult male cultivator for every 5 2 acres on the whole for every 4 6 acres in Class I and for every 5 5 acres in Class IV There is thus a redundance of cultivators in Class I where irrigation is almost wholly by flow and least manual labour is called for, while the cultivators are in all parts sufficient for the cultivated area The plough cattle are throughout unequal to the needs of the cultivation there being only one for 6 5 acres or fewer than even in the Nardak The people manure only 18 per cent of their cultivation The principal staples are *jaudr* wheat and gram which occupy 25 17 and 13 per cent respectively supplemented by cotton fine rice and sugarcane in 7 8½ and 4 per cent. Fifteen per cent of the area is double cropped The cultivation is good as a rule and splendid in the Ját and Ror villages But the condition of a Bángar village is de termined far more by it degree of freedom from *reh* and swamp than by any other consideration It is hardly possible to exaggerate the fertility of a large and populous Ját village well raised out of the

Panipat Bangar—Historical and Comparative

reach of these evils, and with a sufficient supply of canal water, and especially is its condition prosperous if, with the exception of a block of rice land, the irrigation is by lift But it is equally difficult to exaggerate the utterly abject misery of some of the villages most injured by *reh* and swamp The village Báholi, the history of which is sketched in § 169 is one of the very worst, but there are too many others which are not much better The population of the villages most affected has decreased so largely in the manner presently to be described, that the proportion of cultivation to population is not, on the whole, so small as might have been expected from the degree in which the cultivated area has been reduced But in many individual villages the pressure is very great indeed, and land is scantiest just where its yield is smallest

In Class I each member of the cultivating community has 1½ acres, on the whole, he has 1 7 acres, while there is an acre for each village resident of the circle The average proprietary and cultivating holdings are 12 9 and 2 6 acres respectively But within the *reh* limits, which include a very large proportion of the circle, there is literally no room whatever for expansion, the area shown as culturable consisting either of small isolated patches in the midst of sheets of *reh*, or of plains, bearing indeed a coarse grass, but so impregnated with salt or so logged with water as to be quite unfit for cultivation The classification of this land was, as pointed out in § 129 of my Assessment Report, a most difficult matter On the other hand, the really culturable land, though light in the highest part of the circle, is as a rule of as good quality as the land already under the plough Of the cultivation, 7 3 per cent is owned by the Skinners and cultivated by tenants paying rack-rents Excluding this area, 9 2 per cent is held in occupancy tenure, while tenants-at-will cultivate 5 5 per cent more in exceedingly small holdings Rent is almost unknown except in the Skinner villages The figures for alienation of land are given in Statement XXVII As before remarked, they do not represent the real state of affairs The gradation through the four classes of villages is, however, very clearly marked in them

724 Panipat Bangar—Historical and Comparative—The whole of the circle, except one Mandal village, was settled by Mr Edmonstone in 1842 The classified figures in Statement VII tell of themselves the history of the villages On the whole, the cultivation of the circle has increased since settlement by one per cent But in Class I it has fallen off by 20 per cent, and most of the new cultivation lies in Class IV, where it consists largely of high-lying unirrigated land Out of 89 villages the cultivation has decreased in 47, and in 16 villages more than a quarter of the whole has been lost In only nine villages has the increase been as much as 10 per cent The irrigated area has increased by 5 per cent on the whole, having fallen off by 15 per cent in Class I And though less than 83 of this area is on the

Panipat Bangar—Historical and Comparative

average irrigated each year yet the old areas also included all land ordinarily irrigated and several circumstances point to the conclusion that a larger proportion of the canal land is now *habitually* watered than was so watered in 1842 There can be no doubt that the average yield per acre within *reh* limits has very materially decreased since last settlement The reduction in the cultivated area has compelled the people to have recourse to double cropping and the inordinate quantity of water used in flow irrigation has done an immensity of harm while the old system of assessment on irrigated areas has rendered it difficult or impossible for the people to reduce the area irrigated year by year There are villages in which the average irrigated area shown by the canal papers which include double cropped land twice over *exceeds* the whole cultivated area of the village When of soil which is cropped year by year and a sixth of it twice a year 77 per cent is irrigated in the most excessive manner and only 21 per cent is manured exhaustion to some extent is almost a necessary consequence Add to this the baneful influences which have been at work upon it for 30 years and what wonder is it that the cry of the peeple is that the land has given up yielding *dharti dene se baith rahi hai* —a cry supported by the testimony of every officer who has ever inquired into the matter Of course this is only true of the lower villages and especially true of those in which relief has been most inadequate to the injury and the people have been least able to make a stand against the enemy In the higher villages there are no traces of exhaustion of the soil The figures showing changes in population are perhaps more striking than any others connected with this circle It will be seen that although the census figures for the Khadir and Nardak circles show almost conclusively that the population was under estimated in 1852 and in a less degree in 1868 yet according to those very figures the population has decreased since 1852 in the first three classes and in Class I even since 1868 The unhealthiness of the tract and especially the effect which the malaria has upon the procreative power of its inhabitants tend of course to keep down population But the actual decrease is due to some extent to emigration to Jind where the people who have lost most land here hold and cultivate a part of the family living in each place and as the canal evils spread wider and wider the people must be gradually driven in larger and larger numbers from their homes The rise in prices since settlement has already been discussed The true average price of produce is probably greater in the canal circles than elsewhere as there the people are in a position to take fuller advantage of famine rates The cost of production has as already pointed out in section 685 been increased enormously since settlement by the rise in the canal occupier s rates In the injured villages there is always a scarcity and often a total absence of pasture and such grass as there is is often not only innutritious but positively harmful in its effect

Panipat Bangar—Historical and Comparative

725 The fiscal history of the circle has already been described in §164ff The assessment of 1842 was exceedingly moderate, so far as I can judge But the spread of *reh* and swamp has been so rapid that the villages broke down under it, and the reduction given, though considerable, was quite insufficient on the whole, and by no means well apportioned In the beginning of 1877 I wrote as follows —

"The villages of the tract may be described under three heads Those which, well removed above the influence of the *reh*, reap the benefits of the canal without being subject to its injuries, are eminently prosperous True, their soil is often somewhat light, their irrigation somewhat laborious, and their cultivation may have somewhat outstripped their appliances , but their assessment is light, their crops are good, and they can certainly bear an enhancement of the demand, probably quite proportionate to the increase in cultivation, though when that increase is very great it will be advisable to effect the rise gradually

"Those villages which, though out of the lines of drainage and swamp, are so low that their pastures are covered by *reh*, are far less prosperous Their cultivation has decreased, and must decrease still further , the fertility of what remains has diminished , expansion is impossible what little grass there is for the cattle weakens and kills them, and the water is bad for both man and beast Where the village is large and well off, they have saved the mass of their cultivation from any very great deterioration, and the inroads of *reh* are chiefly confined to the edges But where the community is poor, the whole cultivation has suffered, and the *reh* advances with accelerating impetus It is, then, most important to assess lightly this class of villages, so that they may not be hampered in their struggle with the evil

"As for the villages which lie in the drainage lines, or have low land near the canal, their state is pitiful indeed Their early cultivation was, as is the case throughout the district, in the lowest parts of their area , and while the higher lands were becoming covered with *reh*, the stiff soil of the fields helped to preserve the lower from injury But as the water-level rose, and swamps and soakage began to extend, they found their cultivation under water, while, turning too late to their high lands, they perceived that they had become barren , and now they live a semi-amphibious life, their houses crumbling with the damp, crocodiles in their village ponds, the water in the wells so near that, as they say, they can 'draw water without a string,' their sickly feeble cattle obliged to leave the village during the rains, and they themselves suffering from all complications of malarious disease with an unbroken regularity Year by year they sow rice with the certainty that only an exceptionally dry season can save it from being drowned, and that much of it must even then

be injured by too much water year by year they watch the fields as they dry up and rapidly passing a plough through the tenacious mud sow their wheat and barley in the open furrows till the very last moment when there is hope of their germinating or even sow the seed on the unbroken mud and plough over it when the ground is a little drier and this in the knowledge that some of it will fail that heavy rain will drown more of it and that most of what does come up will barely repay the labour spent on it Much of their land is sour and cold from being so permanently saturated with water that though not under water it cannot be cultivated some of it perhaps is separated from their village by the canal the nearest bridge being some miles off and it being forbidden to take cattle to it along the bank In a year of drought these villages no doubt reap splendid crops but years of drought are fortunately the exception and I think that the very largest allowance should be made for the circum stances of estates so situated

My experience of the tract was then limited to a probably ex ceptional series of seasons of full or excessive rainfall Since then I have seen them during a series of I hope exceptionally scanty rains and I think I exaggerated the *a erag* condition of the swampy villages It would be difficult to exaggerate it as it is in really wet years

726 Panipat Bangar—The Assessment—Statements Nos XVII XVIIIA and XVIIIB show the various rates demands and estimates for this circle My proposals as there shown would have very considerably enhanced the current demand But such was not my intention I felt that it was difficult to fix rates which should make just so much allowance as was needed for injury from *reh* which was not capable of being represented in figures and I there fore framed rates which I considered suitable to the Bangar culti vation in its uninjured state and proposed to make allowance for *reh* in assessing individual villages Thus the figures given in my proposals refer to the circle without deduction for actual injury to cultivated fields in individual villages and my produce and rent estimates were framed on the same basis I estimated that the allowances I should have to make would leave the actual assess ment very slightly if at all in advance of the current demand The Commissioner however reduced my rates so as to give at once the same result which I proposed to arrrive it finally and the Financial Commissioner approved of the alteration The actual assessment enhances the current demand by 5 3 or 1 4 per cent according as cesses are or are not taken into account and is 1 9 per cent below that given by sanctioned rates Its incidence is Rs 2 6 6 on the cultivated area against Rs 2 7 3 at last settlement and Rs 2 5 8 of the current demand Cesses raise the incidence of the total burden to Rs 2 14 3 against Rs 2 11 11 in 1876 and Rs 2 10 4 at last settlement.

Panipat Bangar—The Assessment

727 The rates proposed and finally sanctioned are shown in Statement No XVIIIA The area lately thrown out of cultivation, which amounted to 3 per cent of the whole cultivation, was excluded from assessment, as it is land either lately become absolutely barren, or tottering on the verge of barrenness The pasture is moderate in extent, much of it is not really culturable, and that also was excluded The rate for canal land in its unirrigated aspect was needed in order to afford a basis for fixing the owner's rates, and will be discussed when they are treated of It must be remembered in any future use that may be made of, or any deductions that may be drawn from the rates finally sanctioned, that they are not immediately applicable to the ordinary Bángar cultivation, but represent its value after deduction on account of injury done by *reh* to a certain portion of it I found, in applying the rates, that sufficient allowance had not been made for the very considerable proportion of the unirrigated area which lies high on the step above the Rohtak canal, and for which the dry rate was far too high It would have been better had the dry rate been slightly lower, and the irrigated rate correspondingly higher

728 My detailed assessment, so far as fixing the total burden which each village could bear, was made in the same manner as in the other circles The further process of separating the assessment so arrived at into two parts, the fixed demand and the owner's rates, will be discussed presently The change made in the total demand of the tahsil was exceedingly small, but very large changes were made in the assessments of individual villages, thus effecting a re-distribution of the burden which was urgently needed In the villages which had suffered most and received least relief, there was not only the actual state of the fields as they stood to be considered, but also the depressed and impoverished condition of the people In estates held by the Skinners and similar wealthy landowners, however, this latter consideration was absent, and they were assessed up to full half-assets The people, as a rule, accepted the assessment willingly enough, but they could estimate with only very imperfect accuracy the eventual amount to which owner's rates would raise the demand Some of the fine high villages which I have assessed very highly demurred a little, but great satisfaction was felt by all in the fact that the owner's rates portion of the demand was, for the future, in their own hands I had proposed progressive assessments in six villages, in four of which a very large increase was taken, and two of which were depressed villages, formerly in farm to the Skinners In the case of the two latter, the Commissioner acting under the Financial Commissioner's instructions modified the assessments, doing away with their progressive nature Map No XI shows the incidence of the demand, while map No X shows the proportion which the new bear to the old demands The rates and assessments were sanctioned

in the letters already quoted in § 716 The settlement is for 30 years dating from the kharif of 1286 F except in the four estates of Kabri Nohra Sil andarpur and Faridpur which were undergoing complete partition in the beginning of 1879 and in which the new settlement dates from the kharif of 1287 F In two villages Government is empowered by a special clause in the administration papers to enhance the demand at intervals of five years under the circumstances noted in § 751 2 *infra*

729 Karnal Bangar—Descriptive and Statistical—The general physical features of this circle have been described in § 10 *supra* Statements Nos VI to XXI give the statistics The villages in Statement No VII are classified on the same basis as in Pánipat Bangar but land lately abandoned has been included as most of it is swampy land which is now and then cultivated The circle includes 32 estates and comprises an area of 66 605 acres of which—

32 482 acres	or 48 8 pe ce t	e lt t d
1 014	1 5	l t ly b nd ned
15 7 9	23 6	pasture
8 94	13 4	barren by reason f *eh*
4 682	7 0	swampy or nder v t
1 100	1 7	b n f om the s s
2 656	4 0	o c p d by v llag t road &c

Jats and Rors hold 54 per cent of the cultivation including the City of Karnal Rajputs 23 per cent and miscellaneous castes the same *dahar* constitutes 10 per cent *rausli* 81 per cent and *bhur* 9 per cent of the cultivation the last lying on the crown of the Nardak step The original quality of the soil below this step is very fine but much of the soil on the slope and crown is light and inferior The annual rainfall is some 23 inches but as far as the canal irrigated portion of the circle a drought is more welcome than in any other part of the Tract as swamp is the evil from which this circle suffers most The water is some 30 feet deep in the higher portions and close to the sur face by the canal Wells only irrigate 7 per cent all lying on or above to the slope leading to the Nardak The 23 per cent of dry cultivation lies almost entirely on the outskirts of the circle and is as a rule of very inferior quality much of it being really situated in the Nardak and not in the Bangar at all The canal is shown as irrigating 70 per cent of the cultivation but of course the whole of this is not irrigated save in famine years Thus the canal figures for 1874 and 1875 fall short of our figures by some 12 per cent On the other hand the actual irrigation in famine years exceeds in the swampy villages the whole area recorded as irrigable as the drought sets free for cultivation land ordinarily under water At the same time our figures were as noted in § 608 revised in 1875 76 which was a fair average season while the canal figures being an average for the 10 years from 1866 to 1875 include much land which owing to the great increase in swamp caused of late years by alterations in the canal system is now permanently under water Thus the average area on

Karnal Bangar—Descriptive and Statistical

which water rates are paid, which includes a large area twice over, is 10 per cent in excess of our canal irrigated area The greater portion of the irrigation is by flow, but a very considerable area, including all the highest and most of the best part of the cultivation, is irrigated by *lift* The inconvenience due to the supply being dependent upon the amount of irrigation going on lower down the canal, is felt with especial severity in this circle, all the irrigated land on the step and crown of the Nardak slope being able to obtain water only when a full supply is running There is one adult male cultivator to every 5 1 acres, but this is, as in Pánípat Bángar, brought about by there being a redundancy of cultivators in the villages most injured by the canal, and in which, owing to the extensive flow of irrigation, labour is least needed, thus there is in Class I a cultivator to every 3 9 acres, or more than in any other circle or part of a circle There is, on the whole, a plough ox for every 6 acres Not only is this number inadequate to the needs of the cultivation, being smaller than is used even in the rough cultivation of the Nardak, where, too, the cattle are not enfeebled by disease, but the cattle are also badly distributed Thus in Class I, where 87 per cent of flow irrigation leaves the cattle idle save at the ploughing season, there is an ox for every 4 6 acres, while in Class VI, where 7 per cent of the irrigation is from wells, and where some of the canal water also is lifted by cattle, there is only one to every 7 1 acres The people manure only 18½ per cent of their cultivation The principal staples are *jawar*, coarse rice, wheat, and gram, which occupy respectively 13, 11, 22, and 16 per cent of the area They are supplemented by cotton in 7, fine rice in 8½, barley in 6, and sugarcane in 1½ per cent The people double-crop 22 per cent of the area, mostly with a miserable crop of barley or gram, chiefly for the sake of fodder, in the swampy rice fields The cultivation is exceedingly fine in one or two of the western villages which, lying well out of the reach of *reh* or swamp, are watered from the Bala canal, and fine crops are grown on the slope But thousands of acres in the lower portion of the circle are swamps in which a rice crop, the quality of which depends upon the rainfall, is followed by barley which is almost always of the poorest description, and a considerable cultivated area has been vigorously attacked by *reh*, under the effects of which it is yearly decreasing In the worst villages the pressure of population is much greater than in Pánípat Bángar, there being in Class I only 1 2 acres per cultivator and 0 8 acres for each village inhabitant For the whole circle the corresponding figures are 1 6 and 1 0 acres Thus land is most scanty where its produce is smallest The average area of a proprietary holding is 14 2 acres and of a tenancy holding 4 0 acres The area classified as pasture amounts to 25 per cent of the cultivated area in Class I, and to 48 per cent in the whole circle But for the reasons explained in § 723, reasons which the prevalence of the swamp in Karnal intensifies considerably, much of the land

entered as culturable is really either absolutely barren or not worth the labour of cultivation Where swamp rather than *reh* has destroyed it it yields indeed grazing for buffaloes but seed sown in it rots in the ground On the other hand such land as does not come under the above category lies above the Nardak slope and is really in the circle of that name for I speak from personal observation when I say that there is hardly an acre of culturable land uncultivated south of that slope The land on the top of the slope is as land on a ridge appears to be as a rule, inferior it chiefly lies in those villages which have not suffered at all from the canal and therefore have as yet no need to break up poor dry land and it is often no more than sufficient for grazing purposes In the majority of villages so far from expansion being possible the cultivation is *yearly contracting under the influence of the canal and driving* the people from their homes Of the cultivated area 9 0 per cent is held in occupancy tenure while at *least* 24 0 per cent more is held in very small holdings by tenants at will paying no rent to the owners The figures for alienations of land such as they are are given in Statement XXVII They compare very unfavourably with those for Pánípat Bángar

730 Karnal Bangar—Historical and Comparative—More than a third part of the circle was assessed with the Mandal villages the remainder being settled by Mr Edmonstone in 184? Here again *the classified Statement No VII tells by its figures the history of* the villages On the whole circle the cultivation has increased by 6 per cent since last settlement But in Class I it has decreased by 26 per cent and in Class II by 11 per cent while increase is wholly confined to seven of the Government villages and setting aside the three fine villages on the Bala branch already alluded to the greater part of the land which has been brought under the plough since *settlement belong in its physical features* to the Nardak circle is quite beyond the reach of irrigation and is comparatively infertile Irrigation is shown as having increased on the whole by 15 per cent but the *irrigation figures of 1847* are as already remarked not to be trusted and Mr Gubbins in his assessment notes constantly disregarded them as grossly in defect The old figures make the increase in irrigation 22 per cent in the Mandal villages which have lost 7 per cent of their *cultivation and only 10 per cent in* the other villages where there has been an increase of some 13 per cent in cultivation Thus if they are to be accepted irrigation has increased fastest where cultivation has suffered most. As to the change in the average amount of produce the remarks made with respect to Pánípat Bángar apply here with even greater force Excessive overcropping is no less the rule here than there for though in Karnal the best villages have extended their cultivation more largely than the best villages in Panipat while the

comparatively small area they irrigated at settlement has caused the old system of assessment to press less heavily on them, yet exactly the converse is true of the worst villages in both *parganahs* Moreover, as I have already pointed out, a very great deal of low-lying cultivation irrigated by the canal has been replaced by high cultivation on a slope from which water drains off as fast as it falls Again, swamp has a markedly greater effect than *reh* in diminishing the rate of yield *per acre*, and for this reason, that when *reh* has reached a certain point of development the land is hopelessly sterile and is altogether abandoned, while the amount of swamp depends, within certain limits, upon the nature of the season in each year, and a considerable area is therefore yearly sown on chance, of which much will yield next to nothing, but all of which is shown in the acreage of cultivation Eighty per cent of the cultivated area is irrigated year by year, 22 per cent is cropped twice a year, and only 15 per cent is manured Add to this the effect of *reh* and swamp steadily increasing for the last 30 years, and we cannot but conclude that the present yield per acre is very materially less than that which was obtained at last settlement

731 The population figures show that Class I has lost 9 per cent of its population since 1852 and 1 per cent since 1868, while on the whole the increase has been 38 and 1 per cent respectively It is noticeable that, while the proportion of cultivating population to cultivation is greater, that of total village population is less in Karnal than in Pánípat, and the discrepancy is most marked in the worst villages of both circles The explanation probably is that the decrease of cultivation by injury from the canal being of later date in Karnal than in Pánípat, emigration has been less extensive, while the difference is less marked in total population, because those who have no stake in the land are naturally the first to leave the village As it is, the population has increased much faster than has the cultivation The remarks on prices and cost of production in Panípat Bángar apply exactly to this circle

732. The fiscal history of the circle has been given at length in § 144 to 170 *supra* The assessments of the settlements of 1842 and 1856 were, as far as I can judge, very moderate As in Pánípat Bángar, injury from the canal has been attended by insufficient relief, but the circumstances of the two circles differ in one important respect In Karnal Bángar, as described in § 159 *supra*, the drainage of a large area external to the circle is collected in the very narrow strip of land which forms the circle itself, and the result is that, in comparison with Pánípat, swamp plays a relatively much larger part than *reh*, for, of the total area rendered barren in each tract by swamp and *reh*, the area always under water or permanently moist constitutes 35 per cent in Karnal against 24 per cent only in Pánípat The result is that the sickness on the canal is far greater in Karnal than

in Panipat. In section 725 I have described villages stricken by *reh* and swamp respectively and though swampy land can be sown in a dry year while *reh* land is absolutely barren yet the utter uncertainty of the crop and the yearly waste of seed and labour in swampy villages and above all the dreadful effects upon the health of man and beast make the case of their inhabitants far worse than that of those who have indeed lost their pasture by *reh* but who preserve in a great part their cultivation and the strength and means to cultivate it. And another point which must not be lost sight of is that while *reh* is unmistakeable so that most land rendered really barren by it is so entered in the papers it is often most difficult to decide whether a swampy field is only temporarily flooded or really unculturable in ordinary seasons and the doubt is as I have before remarked always resolved to the disadvantage of the villager Relief too is more freely given to the man who can show his fields covered with salts like snow than to him whose land is carpeted with the greenest of green grass and is not half so wet as the neighbouring rice field though it may be absolutely sterile from the *continuous* presence of water in the subsoil forming what Mr Sherer calls dry swamp Relief has indeed been given to the Mandal villages in the revision of 1856 and to the other estates in the general survey of canal villages made in 1860 and already described in sections 166 to 168 and as in Panipat yearly returns of canal action have been submitted and reductions occasionally made But for the reasons just stated the relief has been even more inadequate while the damage has been more extensive than in Panipat There is one important respect however in which the Karnal villages have the advantage of those in Panipat The great increase in irrigation consequent upon the famines of 1860 and 1869 the corresponding raising of the water level in the canal and the heavy rainfall of the six years from 1871 to 1876 have largely increased the swamps within the last few years within which time the increase of *reh* has been comparatively small and thus in Karnal where swamp is relatively of more importance than *reh* a good deal of the damage is of later date than in Panipat many of the estates are less broken down and the relief which has been given has often been separated from the injury by a shorter interval more especially in the Mandal villages in which it dates from as early as 1856 Moreover while it is doubtful in what degree the realignment of the canal will diminish the scourge of *reh* and certain that material relief in this respect cannot be hoped for till after some considerable lapse of time it is hardly possible that the opening out of drainages which will follow the opening of the new canal should not give very considerable relief to swamped villages and that immediately The present condition of the greater number of the villages is miserable in the extreme but fortunately these include all the small estates of the circle Some of the larger estates on the slope are very flourishing while the largest of all on the Bala Canal

have advanced so enormously since last settlement that it will be quite impossible to enhance their assessment proportionally Two of them have nearly *doubled* their cultivation, and the cultivation so added since settlement in these two villages alone constitutes 11 per cent of the whole cultivated area of the circle, while the total increase is only 6 per cent of that area

733. Karnal Bangar—Assessment.—Statements Nos XVII, XVIIIA, XVIIIB, shows the various rates, demands, and estimates for this circle In this circle the injury from the canal, taking chiefly the form of swamp, is principally confined to *dakar*, and I was therefore able to allow for it and to fix at once rates which should be applicable to the soils as they stood It will be observed that I have assessed 6 8 per cent above my sanctioned rates, and considerably above my rent and produce estimates, and that I have raised the demand by 12 4 per cent without, and by 16 9 with cesses, against an increase in cultivation of 6 per cent only, and this in a circle of which the Financial Commissioner remarked, in reviewing my Assessment Report, that "a reduction rather than an increase of assessment was to be expected" But the increase in irrigation has been considerable, some part of the area recorded as swamp will be probably restored to cultivation as soon as the new canal is open, and especially the self-adjusting nature of the owner's rates system is of peculiar value in a swampy circle like this, as in very wet years, when the swamp is at its worst, irrigation will be reduced, and with it the owner's rates demand, while in years of drought, when the demand will be at its highest, the contracted swamps will increase the culturable area I am fully convinced that my fixed demands are most moderate The incidence of the new assessment on the cultivated acre is Rs 2-1-8 against Rs 2-3-7 in 1842-47 and Re 1-14-2 of current demand Including cesses, the incidence is Rs 2-8-5 against Rs 2-2-10 in 1876, and Rs 2-6-6 at last settlement

734. The rate for the several soils will be found in Statement XVIIIA My original rates were sanctioned, the alteration in the unirrigated rate for canal land being a mere matter of account, as explained in § 746 *infra* The irrigated rate is lower than that given by my estimates, but irrigation is most largely practised in just those villages which have suffered most, and the irrigated area includes all the area liable to flooding This, together with the general inferiority of the circle, accounts for the rate being so much lower than the corresponding one for Pánípat, while the dry rate is naturally lower, as the area to which it had to be applied lies almost wholly above the high Nardak step The area of *bhúr* was so insignificant that no separate rate was fixed for it The rates were framed much as in Pánípat Bángar, land lately abandoned which constitutes 3 per cent of the cultivation, and pasture, being excluded from assessment

Karnal Bangar—Assessment

735 The detailed assessments were made as in Panipat Bangar A very large measure of relief was afforded to the worst villages though often less than would have been given had I not been convinced that the owners rates system would of itself afford considerable relief to the people while the finer estates had their assessments considerably enhanced These latter demurred somewhat but they had in reality been treated with sufficient leniency and all the assessments were engaged for without any real hesitation In one village where the increase in demand was large and the heavy floods of the past few years had told upon the people I fixed a progressive assessment. The Mandals appealed against my assessment in seven villages but the ground of their appeals was not that my assessments were too low but that the owners rates had been deducted from the revenue assigned to them The appeals have not yet been decided Map No XI shows the incidence of the assessments and map No X the relief afforded or enhancements taken The rates and assessments were sanctioned in the correspondence quoted in §712 The settlement is for 30 years beginning with the kharif of 1287 Fasli but in three villages Government is empowered by a special clause in the administration paper to enhance the demand at intervals of five years under the circumstances noted in § 751 2 *infra*.

CHAPTER XXII —THE ASSESSMENT—OWNER'S RATES AND FIXED DEMAND.

736 Owner's Rates—Their Nature —Sections 37 and 38 of Act VIII of 1873 provide that Government may impose upon the owners of canal irrigated land, in respect of the benefit they receive from such irrigation, an owner's rate, which shall not exceed the sum which under the rules for the time being in force for the assessment of land revenue, might be assessed on such land on account of the increase in the annual value or produce thereof caused by the canal irrigation

Under the rules in force the owner's rate would not, therefore, exceed half the increase in the net rental of the land due to canal irrigation , and it would be levied only in those harvests in which the land had actually been irrigated from the canal The understanding upon which I framed my original proposals was, that the owner's rate was intended to represent that portion of the land revenue assessed upon the additional rental due to canal irrigation The change in system might then be represented as follows The rent of a given quantity of land being worth A rupees without and rupees $A+B$ with canal irrigation, and Government being entitled to half the rental as land revenue, the land would under the old system be assessed at $\frac{A}{2}$ when dry, and at $\frac{A+B}{2}$ when irrigated , while under the new system it would be assessed in the first place at $\frac{A}{2}$ in both cases, $\frac{B}{2}$ being taken in the form of owner's rates in addition to the fixed demand when the land was irrigated Thus the whole extent of the alteration would be that the additional assessment due to irrigation would be taken only when the land was actually irrigated, instead of being demanded regularly year by year without regard to whether water had been taken or not

737 The Government of India has, however, ruled quite lately that this is an erroneous conception of the nature and basis o owner's rates, and has substituted the following explanation The additional rental B springing from canal irrigation is no way due to *any act of the owner, but results from the introduction of* canal irrigation at Government expense Thus it belongs wholly to Government and is demandable by Government as canal revenue This being the case, A is the net rental of the land whether irrigated or dry, and the whole land revenue is represented by $\frac{A}{2}$, there being no part of B left to assess land revenue upon But as an act of grace Government consents to relinquish half of B and to demand only the other half Still this in no way alters the nature of the respective demands, nor can the half of B which is relinquished be assessed

to land revenue Thus the fixed assessment $\frac{A}{2}$ is the whole land revenue while $\frac{B}{2}$ taken by owner's rates is canal revenue This ruling in no way alters the theoretical method of assessment or the effect of the change of system upon the people for the fixed demand is still to represent $\frac{A}{2}$ and the owner's rates $\frac{B}{2}$ In other words the Government demand based upon *half of the whole rental is to be* divided into two parts that due to canal irrigation is to be realised in the shape of owner's rates and the remainder in the shape of a fixed demand

738 Owner's Rates—Their Form—The first question to be decided was whether the owner's rates should take the form of a fixed or of a varying rate and especially of a rate varying with the occupier's or water rate Now it is of capital importance to remember that in this tract at any rate where the great mass of the area is cultivated by the owners themselves and where the great majority of the tenants even who hold the remainder of that area pay revenue and owner's rates just as if they were owners the owner's rate the instant it is imposed practically becomes a part of the cost of irrigation If a man has to pay to Government Rs 3 more on an acre of land when he irrigates it from the canal than when he does not that Rs 3 represents to him part of the cost of irrigation quite independently of the question whether Government calls Rs 2 of it occupier's and Re 1 of it owner's rate or not. Now as the worst land and poorest crops irrigated are those in which irrigation gives an additional yield only just larger than the cost of that irrigation *any* increase in the cost of irrigation must exclude from irrigation the worst lands and poorest crops previously irrigated as it will no longer pay to irrigate them at the enhanced cost. But an addition to the cost of irrigation carefully adapted to the amount of surplus yield due to irrigation in each case would thus exclude from irrigation a very much smaller area than would be excluded by an all round rate calculated to yield the same total amount

739 To take a concrete case suppose a villager to own and cultivate in person land of which the surplus yield after deducting all costs of cultivation including occupier's or water rate is as follows —

Acres	Surplus yield per acre						Difference per acre due to irrigation		
	Irrigated			Not irrigated					
	R	a	p	Rs		p	Rs		p
1 000	6	8	0	5	8	0	1	0	0
2 000	4	8	0	3	12	0	0	12	0
3 000	3	0	0	2	1	0	0	4	0
4 000	1	8	0	1	12	0			

Owner's Rates—Their Form

It does not pay him to irrigate the 4,000 acres, and he does not do so I now come and impose an owner's rate His profit is Rs 24,500 from 6,000 irrigated acres, and Rs 7,000 from 4,000 unirrigated, in all Rs 31,500 If he did not irrigate at all, his profit would be Rs 28,250 Accordingly the owner's rates must bring in half the excess profit due to irrigation, or Rs 1,625 If I distribute this equally over his 6,000 irrigated acres, I get a rate of As 4-4 which he has to pay on every acre he irrigates, and it no longer pays him to irrigate the 3,000 acres Supposing he throws them out of irrigation, and the owner's rate is again adjusted It then becomes As 13-4, at which rate even the 2,000 acres would not pay for irrigation, and so forth But if I take an owner's rate of As 8, As 6, and As 2 on the three irrigated areas respectively, or half the excess profit due to irrigation in each case, I obtain the same sum, and it will still pay him to irrigate the whole 6,000 acres I neglect the fixed Government demand in each case, as that has to be paid however much or little he cultivates or irrigates, and therefore does not affect his proceedings When a landlord receives rent the point is even still more marked, for the tenant will irrigate whenever irrigation will recoup him for the occupier's rate he has to pay, while an all-round owner's rate would certainly amount on some soils to more than the whole rent out of which the landlord has to pay it

740. The fact is, that the considerations which apply to a compulsory payment do not apply to an optional one, and that though the former may well take the form of an all-round rate, the latter cannot do so without disturbing the economy of the tract Take the case of a Khádir village Government takes a share of the rental of the village, and for convenience sake and in order to encourage enterprise by allowing the cultivator to reap the benefit of it, fixes its demand for a term of years Say that that demand falls at Rs 2-8 an acre on existing cultivation Since no diminution or extension of cultivation will affect the demand, it will pay to cultivate land which yields only 4 annas an acre profit over and above the cost of cultivation But if Government were to take Rs 2-8 per acre on the actual cultivation in each year, it would no longer pay to cultivate any land that did not yield a profit of more than Rs 2-8 an acre Thus, to fix a uniform all-round owner's rate would, by excluding land from irrigation, at once reduce the Government revenue

But this is not the only consideration The canal irrigation in this district is of long standing, and has been allowed by Government to assume its present proportions As pointed out by Sir William Muir, "the presence of canals produces a new and artificial change, both physical and social, in the country within its range Irrigation once provided" (I would rather say established), "becomes to a great extent a necessity to the people," and he goes on to show how the stock of cattle diminishes, the wells fall into disrepair, and

Owner s Rates—Their Form

the whole agricultural economy of the village moulds itself upon the altered conditions I do not for one moment agree with those who hold that the prescriptive rights of the people to water should stand in the way of any enforced diminution of irrigation that may be ne cessary for the good of the tract in general but I do not think that Government would be justified in interfering with those rights mere ly in order either to enhance its revenue or to attain simplicity in its accounts Thu theoretically the owner s rate should vary with the amount of net profit in each case and therefore with—(1) the soil (2) the style of cultivation and (3) the crop in each case practically the nearer it approaches to this the better a fixed rate is not only theore tically but also practically inadmissible

741 As far as concerns variation with the crop we have a scale of the sort ready made to our hands in the occupier s or water rates The objection raised to taking these rates as our basis is that they form part of the cost of production while owner s rates are to repre sent a proportion of the rental which varies inversely with the cost of production But this is not quite correct The rental varies with the surplus produce after deducting the cost of production and if the net produce increases faster than the cost of production the rental will rise also As a fact those very staples such as sugarcane of which the cost of production is highest usually pay the highest rent A more just objection is that the occupier s rates are intended to represent the value of the water taken for each crop and not the net value of that crop My estimate of the yield of canal land in its unirrigated aspect framed as described in § 674 *supra* which is of course purely hypothetical gives the following results —

Irrigated crop	Val p ac f ne si th of rpl y ld due to ir g t			H lf occup e s rates.		
	Rs		I	Rs		p
Sugarcane	4	4	0	2	8	0
Cotton	1	1	4	1	2	0
Rice	0	13	4	1	8	0
Wheat	0	15	8	1	2	0

But here sugarcane is supposed in the absence of irrigation to be replaced by wheat and cotton in equal parts and the enormous sav ing in labour and cost of cultivation that would thus be effected would bring it down much nearer to a level with other crops In fact sugar cane cannot and does not pay as rent the same proportion of the pro duce that is paid in the case of other staples On the whole the in convenience of having two concurrent scales for canal rates eemed so great that I recommended that the owner s rates should take the form

of a fixed proportion of the occupier's rates, while pointing out that a revision of the scale was advisable The proposal was accepted, and I believe that a revision of the occupier's rates is contemplated When this is made, it should, I think, be borne in mind that the two rates are founded upon wholly distinct bases, and a mixed rate should be fixed so that the rate, plus whatever proportion of it is to be taken as owner's rates, shall equal the value of the water needed for the crop, plus half the additional rental due to irrigation It is true that the rate so framed will in itself represent nothing in particular, but the only alternative is a double scale

742. Owner's Rates—Proportion of the Occupier's Rates to be taken.—The next step was to fix the proportion of the occupier's rate which was to be taken as owner's rates But we must first define more exactly what we mean by the yield of canal land in its unirrigated aspect, for this is the very foundation of the computation of owner's rates Take the extreme case, and suppose the canal to be closed altogether In the course of some years the Bángar would revert to the condition it presented when we first acquired the Tract The water level would sink to 60 feet or more below the surface, rain would become much scantier and less frequent, irrigation from wells would be scanty, and the general aspect of the cultivation would, in a considerable degree, assimilate with that of the Naidak, the yield of an individual field being reduced enormously On the other hand, suppose irrigation to be discontinued in that field only, and otherwise to continue in full swing on all sides The general moisture of the tract would be undiminished, the water would be, as now, perhaps within a few feet of the surface, and the diminution in the yield of that field due to suspension of irrigation would be infinitely smaller than in the case first supposed The question is, which aspect is to be adopted as the basis of our estimate of unirrigated yield? I have taken the latter throughout, and for the following reasons Supposing a typical acre to produce Rs 20 worth of grain if irrigated If it were left unwatered, and irrigation were carried on as usual in the tract, it might produce Rs 12 worth, while, if the canal were closed and irrigation wholly discontinued, it would produce, say, only Rs 6 worth If therefore Rs 6 were taken as the estimated value of unirrigated produce, Rs 14 would be taken as the basis of the owner's rate, and the owner of the typical acre, by not irrigating while others continued to do so, would get Rs 12 worth and only pay Government for Rs 6 worth, the people who did irrigate paying among them for the other Rs 8 worth, in the shape of an enhanced owner's rate Assuming, as I may safely do, that the canal will not be closed or irrigation wholly or even very largely discontinued, I have adopted the Rs 12 as the basis for my estimates and rates for canal land in its unirrigated aspect It is true that part of the unirrigated rate thus fixed is really due to the presence of the canal, but so is a portion of the rate fixed for dry land, for there is not an acre of land in the Bángar which is not in some degree

Owner s Rates—Proportion of the Occupier s Rates to be taken

benefited by the presence of the canal and the irrigation from it On the other hand the same rate cannot be applied to dry land and to canal land in its unirrigated aspect partly because the latter lies lower and forming part of the irrigated mass is moister but still more because it includes all the manured land all the best soils all the finest crops and all the most careful cultivation Separate rates have therefore been fixed for canal land in its unirrigated aspect on the basis just described—a basis which was formally and explicitly recognised and sanctioned by the Financial Commissioner in page xxxiii of his review of my Pánípat Assessment Report

743 The rates applied to soil areas give the following results —

	Pánípat Bá g	K n l Bá g	Total
D ff nce betwe n g t d and g t d assessments at—	Rs	Rs	Rs
Proposed t	71 658	13 958	85 616
Sanctioned rat	67 179	20 937	88 116
Average n l amount of occup e s t s 1866 75	1 43 124	53 422	1 96 546

My proposals were that a general owner s rate of half occupier s rates for Pánípat and one third occupier s rates for Karnal should be sanctioned as a revenue rate but that in the detailed assessments the proportion to be actually taken in each village should be fixed separately no refinements being necessary as the rate was to some extent self adjusting but some simple fraction such as a quarter four fifths and the like being fixed in each case The reasons for fixing a separate proportion for each village were as follows —I have attempted to show that the owner s rate should as far as practically possible vary with the soil the style of cultivation and the crop A rough approximation to crop rates had already been attained by the adoption of the occupier s rates as our basis Detailed soil rates were of course impracticable but in reserving to myself liberty to vary the proportion which owner s were to bear to occupier s rates in each village I proposed to make allowances for the diversity of soil and position which is so marked in the canal tract Without some such adjustment it is absolutely impossible to make a true dry assessment which shall not either ruin villages or fling away Government revenue

744 Take two extreme instances suppose two villages *A* and *B* each consisting of 1 000 acres of canal irrigated land on which they pay the flow rate of Rs 2 4 the former one of the finest of the high *Pánípat villages raised well out of the reach of reh and swamp and* held by a large and wealthy Jat community the latter a low lying

Owner's Rates—Proportion of the Occupier's Rates to be taken

swampy village in Karnal, with *reh* in its borders, and owned by a depressed Rájput community *A* will yield, after deducting all costs of cultivation except canal rates, a surplus of some Rs 8,000, leaving, after paying Rs 2,250 as occupier's rate, a rental of Rs 5,750 upon which to assess, without irrigation, the rental would be at the most Rs 2,000 *B* with irrigation will yield a surplus, as before, of Rs 6,000 at the most, leaving after paying occupier's rate a rental of Rs 3,750 upon which to assess without irrigation the rental would be perhaps Rs 2,500 The figures, then, stand as follows —

	Village A	Village B
Irrigated assessment at half assets	Rs 2,875	1,875
Unirrigated ,, ,,	,, 1,000	1,250
Difference to be realised by owner's rates	Rs 1,875	625
Amount of occupier's rates	,, 2,250	2,250

Again, if *A*, as is not unlikely, irrigates wholly by lift, it will pay the reduced occupier's rate of Re 1-8, and assuming that the total cost of irrigation, that is labour plus occupier's rates, and therefore the net profit, is the same in both cases, the figures will stand thus—

	Village A	Village B
Irrigated assessment at half assets	Rs 2,875	1,875
Unirrigated ,, ,,	,, 1,000	1,250
Difference to be realised by owner's rates	Rs 1,875	625
Amount of occupier's rates	,, 1,500	2,250

Now, if are to take the same proportion of the occupier's rates as owner's rates in both these villages, we must either fix such a small proportion that *A* will be absurdly lightly assessed, to the injury of the Government revenue, or we must fix such a high proportion as practically to prohibit irrigation altogether in *B*, or we must manipulate the fixed portion of the assessment so that it no longer remains a true unirrigated assessment Of course exception may be taken to the figures of the example But the broad fact remains that the irrigated rental is largest in the high villages where the unirrigated yield is smallest, and smallest in the swampy villages in which the unirrigated yield is greatest, in other words, that the surplus rental due to irrigation, of which the owner's rates are to represent half, varies enormously with the position of the village, being increased in high villages, not only by the irrigated rental being higher, but also by the unirrigated rental being lower than in others Since, then, the occupier's rates are the same for both villages, or if they vary, are lowest in the high villages irrigated by lift in which the owner's rates should be highest, it is obvious that no fixed proportion of these rates can possibly give a *true* owner's rate assessment, because it cannot represent half the additional rental due to irrigation At the same time to fix such a high proportion as should give a full owner's rates assessment in dry villages would virtually be to prohibit irrigation in wet villages—a course which, for reasons explained in § 740 *supra*, I did not feel justified in proposing

Owners Rates—Nature of the fixed demand

745 It was decided by Government however that the inconvenience of *having a varying proportion* between owners and occupiers rates was too great to be endured more especially as the owners rate would virtually become a part of the cost of the water to the people and I was directed that the proportion must be fixed for the whole Tract *the necessary adjustment of assessment due to the* varying conditions of the villages being made in the fixed part of the demand Under these circumstances I proposed that one half should be taken throughout although this would give considerably *more* than the estimated value of owners rates and this *for several* reasons because the irrigation will almost certainly diminish slightly in Karnal Bángar under the new system at any rate in wet years because a slightly high rate for irrigation will do good rather than harm in the swampy villages and because if either portion of the demand is to be raised above the standard it is safer to raise the rates which can always be altered at a years notice and which are more or less self adjusting in their working than the fixed demand which it is exceedingly difficult and inadvisable to reduce without grave necessity It was therefore finally decided that the owners rates should for the present be fixed at half the occupiers rates and an entry to this precise effect has been made in the administration papers

746 Owners Rates—Nature of the fixed demand—It is obvious that this decision at once does away with the principle of dividing the total demand upon the village into a fixed demand representing half the unirrigated rental and an owners rates demand estimated to represent half the additional rental due to irrigation in other words that the demand announced to the people is a *fixed* but not a *dry* assessment. Thus directly this point was decided it became necessary to reduce the unirrigated rate for canal land in Karnal Bángar from Re 1 10 to Re 1 5 for as the land was to be assessed at an all round rate of Rs 2 4 and as half occupiers rates averaged As 15 an acre only Re 1 5 remained to represent the fixed demand though Re 1 10 of course represented as before the true dry demand It is because I wish specially to bring out this point forcibly and clearly that I have dwelt upon the nature of my original proposals and upon the orders passed on them Those proposals were framed on the understanding that I was bound to fix in all cases a true dry assessment added to which the varying owners rates would give the total assessment The final decision was that the owners rates were to be fixed and that in case in which those fixed rates would probably fall short of or exceed the true additional demand due to irrigation in each village the difference was to be added to or deducted from the fixed part of the demand The latter method is far more uniform and simpler in its working the only difficulty it presents is the necessity for revision of the fixed demand in certain villages in the event of the supply of water being materially *circumscribed or the rates materially enhanced and in very many*

villages there is practically no difference between the fixed demand arrived at under it and a true dry demand All I wish to insist upon is, that the fixed demand is by no means *necessarily* a dry demand ; and that the circumstances of the individual village must be examined before it can be assumed that no enforced reduction in irrigation will affect the ability of the village to pay its fixed demand And it is necessary to insist upon this point, because the canal officers are most properly aiming at a gradual reduction of the excessive irrigation which is too common in the tract, and they have understood that the new demands are *barani* or dry demands, and that they may accordingly set them wholly aside in considering the question of irrigation The measures that have been taken to assist officers in determining the question of future reduction of irrigation and demand are detailed below in § 779

747 Owner's Rates—The detailed assessment—Thus the general principle on which the detailed assessments have been framed is as follows —The total burden which a village can bear has first been assessed on the old principle, without any reference to owner's rates The probable amount which the village will have to pay in the form of owner's rates has then been deduced from the figures for past occupier's rates, viewed in the light of the present circumstances of the village, and the difference between the two amounts has been announced as the fixed demand Thus, to revert to our original example of the two extreme villages described in § 744, we have the following figures —

		Village A		Village B
Total assessment	Rs	2,875	Rs	1,875
Half occupier's rate	,,	1,125	,,	1,125
Difference, or fixed demand announced	Rs	1,750	Rs	750
True dry demand	,,	1,000	,,	1,250

or, if *A* irrigates by lift only—

		Village A		Village B
Total assessment	Rs	2,875	Rs	1,875
Half occupier's rates	,,	750	,,	1,125
Difference, or fixed demand announced	Rs	2,125	Rs	750
True dry demand	,,	1,000	,,	1,250

In the case of *A* and similar villages the difference of Rs 1,750 or Rs 2,125, according as the irrigation is by flow or lift, has been announced as the fixed demand , but, as the true unirrigated assessment of the village is only Rs 1,000, it is obvious that the fixed demand really includes a large portion of the demand due to irrigation, and could not possibly be paid if the irrigation were appreciably reduced And the figures of the example are by no means exaggerated, though of course such villages are exceptional Take the village of Isrâna, the most marked example in the tract It cultivates 2,250 acres, of which it irrigates only half, and that wholly by flow, and it has no wells I assessed it at Rs 7,500, and as half occupier's rates only amounted to Rs 1,300, I announced a fixed

demand of Rs 4,400 But without irrigation it most certainly could not pay more than Rs 2,250 Applying the same method to village *B* we find our elves confronted by a new difficulty for the fixed demand given by the figures is only Rs 750 while the true dry assessment is Rs 1 250 Thus if we announce Rs 750 the village has only to relinquish irrigation to pay Rs 500 less than it ought to pay to Government and here too the figures of the example though representing very exceptional cases are so far from being exaggerated that they actually fall short of the facts in some villages where half average occupier s rates actually *exceed* the total assessment which I thought the village able to bear so that the fixed demand given by my figures was a minus quantity

748 The fact is that the figures for occupier s rates based as they are upon the actual payments made by each village between 1866 and 1875 are not in the swampiest villages a wholly satisfactory basis for an estimate of the probable future owner s rates demand In the first case they include a rate called *sulabi* which has hitherto been charged upon spring crops not themselves irrigated from the canal but immediately following rice which has been so irrigated and in very bad villages where nothing but rice will grow in the autumn and spring crops must be sown after it for fodder this rate forms an appreciable proportion of the whole insomuch that in some of the worst village the average area on which water rates had been levied was 130 per cent of the whole cultivated area The rate has just been ordered to be di continued for the present though I believe the question of its imposition is by no means finally settled Again the *figures include water rates paid upon a certain* area of land which has since become unculturable owing to the spread of *r h* and swamp and finally there can be little doubt that in many moist villages the enhanced cost of irrigation under the new system will lead the people to contract their irrigation in some cases probably to a considerable extent At the same time it was as pointed out by the Financial Commissioner in his orders upon my Lampat Report necessary to exercise great caution in calculating in advance on the discontinuance of the use of canal water in water logged villages in consequence of the lightness of the fixed assessment The soil of such villages has been described as a sponge which holds up the plants while they draw such nutrition as they do derive from the canal water alone and the description is exaggerated rather than untrue Moreover many of the worst villages are so wet that nothing but rice can be grown in the autumn and though when the rains set in water is plentiful without irrigation yet canal water must be taken to start the crop and when once taken full rates are charged These considerations are much less forcible in those few villages in which a good many wells still exist in fairly good order irrigation from which could be substituted for irrigation from the

Owner's Rates—The Term of Settlement

canal But even here, too much stress must not be laid upon the existence of the wells, for it will in many cases need both time and capital to put them in working order, and to procure the oxen necessary to work them

749 To meet these cases I adopted the two following principles *first*, that the fixed demand should never fall below such a moderate dry demand as I felt certain the village could pay, even if irrigation were wholly denied it, *secondly*, that though the greatest caution was needed in discounting beforehand a probable decrease in irrigation, yet in villages whose history and circumstances rendered it practically certain that irrigation would in future reach the old figures, only in the event of such a reduction of swamp and consequent improvement in the condition of the village taking place as would fully compensate for the increased burden, it was not only possible but necessary to make allowance for the facts, and to raise the fixed demand, even when it was already above the true dry demand, to a higher figure than that obtained by the deduction of half the full occupier's rates of past years The application of the first principle was called for in only a very few villages, the second was more often applied, especially in Karnál, but even there the villages falling under it were comparatively few The method of assessment adopted by me was formally approved of by Government in its orders upon the Rohtak Revenue Rates Report, where the question will be found discussed at some length, and in its No 1172 of 30th October 1879, conveying final orders upon my Pánípat Assessment Report

750. Owner's Rates—The Term of Settlement—The uncertainty as to what the future burden of owner's rates will be under the new system, necessarily produced a corresponding uncertainty in the detailed assessment We had introduced a radical change into our system, but had nothing to guide us in fixing the future demand save the facts of its working before the change, we had raised the cost of irrigation by 50 per cent, and had nothing to guide us as to the result but the irrigation figures before the rise And these figures, which depend upon the kind of crops sown and the amount of double-cropping as much as upon the mere area irrigated, varied in the most extraordinary and apparently arbitrary manner, one village having paid as much again in the shape of occupier's rates as another apparently precisely similarly situated At the same time they afforded the only safe basis—indeed the only basis—which we had to work upon It would have been unsafe in the extreme to found the assessments upon mere estimates, and to assume on the strength of all round-rates, that a village would in future pay much less or much more than it had paid in the past Thus the fixed assessment, not being in fact an assessment at all, but only the amount remaining from an assessment after deductions which are more or less

low and never of a too high fixed assessment and if a low fixed demand induces swampy villages to reduce their irrigation the temporary loss of revenue will be more than compensated for by the general improvement of the tract. The adjustment of the fixed demand was rendered still more difficult by the fact that the whole machinery of irrigation is just now in a state of flux. The old canal and its distributaries are being replaced by a new system part of which has just come into action. It is certain plete will very largely modify the condit ile it is impossible to foretell the nature o x It was dangerous to count upon any future amelioration except in the very few cases in which its occurrence was certain it was impossible to allow for future injury which was only probable. Thus the circumstances were difficult and all I could do was to assess to the best of my judgment the villages as they stood to point out very clearly what dangers were to be apprehended and in what direction care was necessary in the future and to put on record such facts as might be useful hereafter. My attempts to do thi are described in § 779 *infra*.

751 Five yearly Revision of Assessment.—Under these circumstances the Financial Commissioner suggested that it might be well to settle the canal tract for 15 years only. The foregoing remarks will have shown how very much there was to be said in favour of the proposal. It is almost certain that 15 years working of the new system will disclose inequalities in the fixed assessment. The assessment could not possibly be enhanced during currency of settlement and even though reductions can theoretically be given at any time it requires in practice very great pressure indeed to bring them into the ordinary district routine. On the other hand was the fact that the people had suffered for 38 years that the improvement would be for the most part very gradual and that if care was taken to give reductions when really necessary the enhancement of the fixed demand (for the owner s rates would rise of themselves as irrigation extended) might well be postponed as a slight set off to the tardy and insufficient nature of the former relief. And on general grounds the shortening the term of settlement was of course objectionable if it could be avoided. The Government finally directed that the term of the settlement should be for 30 years but that Government should reserve discretion to revise at the end of each five yearly period the assessment of those villages in which the fixed demand fell short of the true dry assessment of the village.

752 As already explained in § 749 I had endeavoured so to frame my assessments that in no village should the fixed demand fall

below a moderate dry assessment But when re-considering the assessment of each canal village in connection with the question to be discussed presently of future reduction of canal irrigation, I selected the five villages of Begampur, Rer, and Kutáná in tahsil Karnál, and Báholi and Wazírpur Titáná in tahsil Pánípat, and inserted in their administration papers a clause securing to Government the power of five-yearly revision They are all swampy villages of the most aggravated description, in which the cultivators have been reduced to abject poverty by injury from the canal unaccompanied by sufficient relief, and in assessing them I had been obliged to consider what they could pay in their present abnormally depressed condition, while leaving room for them to recover themselves I do not think it would have been wise to have demanded, in the first instance, more than the very moderate fixed demand I imposed, but it is almost certain that they will improve rapidly under a moderate assessment, and especially if, as is probable, the realignment of the canal relieves them of their swamps, and that their assessment is lower in relation to their mere physical capacity, than that of any other villages in the tract But in reporting my action, I pointed out that when the time came for deciding whether the demand should be enhanced or not, great care must be taken not to base any increase upon the results of a dry season only, as villages of that sort often yield in a year of drought several times as much as is obtained from them on the average of varying seasons The Financial Commissioner approved my action, and directed that when the question of revision came up, attention should be paid to the above remarks

753 Incidents attached to Owner's Rates—It has been provisionally decided, subject to the final orders of the Government of India, that all cesses will be levied upon owner's rates as though they were land revenue It has also been ruled that no allowances to *zaildárs* or chief headmen will be made out of this rate I am afraid there is a little confusion in the minds of the people about the true nature of owner's rates When announcing the new demands, I explained that these rates represented that part of the land revenue due to canal irrigation Since the new ruling was communicated to me, I have endeavoured to explain that I was mistaken, but I have had no opportunity of correcting my announcement as publicly as it was made, while the fact that cesses are levied on the owner's rates as on land revenue, and are not levied on the occupier's rates which they understand to be canal revenue, makes it difficult for the people to appreciate the distinction now drawn

It has been decided that owner's rates, not being land revenue, go to Government, whether the land on which they are levied is assigned or not But the Punjab Government, in its No 1365 of 18th December 1879, sanctioned the exemption from these rates of all canal irrigated

Incidents attached to Owner s Rates

land in the city of Panípat on the ground that the whole city area is held revenue free or on a permanent quit rent and that it enjoyed canal irrigation at the date of the grant The question whether the Mandals and other assignees of land revenue whose lands were not so irrigated at the time of their first assignment shall or shall not receive compensation for the loss of income caused by the separation of these rates is now under the consideration of Government *

*NOTE —I bel eve t has s ce b en decided that the Mandals are to eceive the owne s rates of all villages wh ch were i r gated at last settlement

CHAPTER XXIII.—THE ASSESSMENT—GENERAL RESUME

754. Resume of the Assessment—The Nardak.—We have in the Nardak a high arid tract of scanty rainfall, held by a population which largely supplements agriculture by cattle farming, and having only 27 per cent of its area cultivated. Of the cultivation, 9 per cent is irrigated by wells, while 3 per cent is protected by and 1½ per cent ordinarily watered from the canal. Only 5 per cent is manured. Nine per cent of the cultivation is held by alien landlords, 60 per cent by Rájputs and Gújars, and only 31 per cent of Játs and Rors. These last are chiefly found in the fringeing villages of the tract, which, though the soil is distinctly inferior, have water at a moderate depth. These villages constitute only a sixth of the total area, but comprise two-sevenths of the cultivation, of which 32 per cent is irrigated, including all the canal land. The remainder of the tract constituting the Nardak proper, and principally held by Rájputs, has only 5 per cent of its cultivation irrigated, water being at a depth of 90 to 140 feet; the crops are therefore entirely dependent upon an uncertain rainfall averaging less than 18 inches, while the great stiffness of the soil enhances the eminently precarious nature of the yield. Thus of the last 40 crops, 16 have failed almost completely. Ninety-two per cent of the whole cultivated area is under inferior sorts of grain, the yield of which, on the average of a number of years, is only sufficient for the subsistence of not quite two-thirds of the whole village population. At *least* 15 per cent of the cultivation is in the hands of tenants paying no rent to the owners, while strangers own or hold in mortgage 9 per cent more. There is an ample supply of cultivators; and agricultural appliances are, considering the inferior nature of the cultivation, fairly equal, over the whole tract, to the area under the plough; though the fringeing villages have been much crippled in this respect by the cattle epidemic of 1869. The existing cultivation, if not supplemented by the produce of cattle, would be quite unequal to the needs of the population; but, though all the low-lying ground is already cultivated, there is ample room for expansion in the higher and drier soils.

755. The circle was held till 1849 on grain collections: an assessment was then made which was never realised; and the reductions effected in 1852 being insufficient, the greater part of it was held in direct management, or rather mismanagement, till 1856, when a reduction of more than 30 per cent was made in the demand. Since then the revenue has been, except in years of actual famine, collected, though with great difficulty and irregularity. Early figures

afford no trustworthy basis for a comparison but it is probable that setting aside the extraordinary seasons of 1873 75 cultivation has not materially increased since 1847 while the wells have decreased in number by 28 per cent on the whole and 42 per cent in the Nardak proper Meanwhile the population is multiplying rapidly The cost of production has increased largely but while the average yield has probably not sensibly altered prices have risen by a quarter The people are still as Mr Lawrence described them to be in 1843 the poorest in the district their herds which form their mainstay in bad seasons have been terribly diminished by the cattle epidemic of 1869 and are now suffering greatly most of the estates are impoverished there is no hope of consideration being ever shown them by the Mandals and therefore no hope of any consideration except when distress rises to a pitch which justifies the district officials in interfering It was very necessary to give the Nardak villages very general relief in the shape of reduction of assessment

756 In this circle a reduction of 19 3 per cent has been given in the current demand which additional cesses amounting to 1_ per cent on the revenue imposed since last settlement have reduced to 16 8 per cent on the whole burden as it stood in 1876 and to 13 5 on that of 1856 The demand so imposed forms 101 6 per cent of the assessment at sanctioned rates and 108 1 and 107 7 per cent of those given by rent and produce estimates respectively The relief afforded by redistribution of the demand over the individual villages has perhaps been even greater than that afforded by the general reduction and was even more urgently needed The all round rate on cultivation is still 10 per cent higher than that imposed in 1860 upon the neighbouring and similar villages of the Kaithal and Indri parganahs

757 Resume of the Assessment—Panipat Khadir —In Pánipat Khadir we have a tract of which 59 per cent is under cultivation The soil is for the most part fertile especially when carefully tilled but a considerable portion is very sandy and poor and 2½ per cent is exposed to flooding by the river Its lightness and the nearness of the water reduce the labour of agriculture and 74 per cent of the cultivation is protected from drought by canals and permanent wells while 11 per cent is partially protected by temporary wells the crops are however exceedingly liable to damage by excess of moisture 32 per cent of the cultivation is manured The mass of the cultivation is carried on by the proprietors themselves but *at least* 11 per cent of it is in the hands of very small tenants who pay no rent to the owners and strangers own or hold in mortgage 4½ per cent of it Thirty eight per cent of the cultivated area is in the hands of the best and 33 per cent in those of the worst cultivators in India while the remainder is with castes but little better than the Gujars Agricul

tural appliances are fairly equal, and cultivators more than equal to the area under the plough, but the cattle are not sufficient to enable full use to be made of the existing means of irrigation The population, especially in Ját villages, is disproportionately large, even to the verge of distress, and the sub-division of holdings is excessive

758. After cruel over-assessment which impoverished the Játs and drove away the others, gradual but insufficient relief was followed at the end of 25 years of suffering by an assessment which, though light only by comparison, was fairly distributed, and must be said to have worked distinctly well During 35 years of this assessment the people have been free from distress, except such as has been caused by famine, the cultivated area has increased by 9 per cent, and has in a large number of villages, and notably in the best ones, almost reached the limit of profitable expansion, while the population is rapidly increasing The cost of production has increased largely, and the average yield must have somewhat decreased, but prices have risen by a quarter, and agricultural appliances have fully kept pace with the cultivation The people of the tract may be said, in general, to be prosperous, though not inordinately so, but many of the Gújar villages, and some Ját ones in which sufficient reduction was not given in 1842, required relief, though not in any large degree Some of the Gújar and many of the Ját villages have naturally had their demand enhanced, though on the whole the increase in the assessment is smaller than that in the cultivation, and in some villages, where the advance made has been very great, it has been thought inadvisable to realise the full demand at once

759 In this circle the demand has been enhanced by 2 4 per cent, while additional cesses imposed have raised the total increase to 6 4 per cent on the burden of 1876 and to 11 9 per cent on that of last settlement The new assessment is 99 4 per cent of that given by the sanctioned rates, and 2 3 per cent in excess of my rent and 0 7 per cent below my produce estimates At the same time the incidence of the burden has been redistributed so as to afford much-needed relief to many of the estates which had, from various reasons, become impoverished

760 Resume of the Assessment—Karnal Khadir—This tract is, in many respects, the exact antithesis of the Nardak The soil in general is not infertile, and well repays careful cultivation, though without it its yield is small, and a considerable portion of it is always very sandy and poor Eleven per cent of it is liable to most destructive inundation by the river, while the whole northern corner has been seriously damaged by *reh* and swamp from the canal and its escape—evils which are slowly increasing The lightness of the soil and the nearness of water reduce the labour of agriculture to a minimum Of

Resume of the Assessment—Karnal Khadir

the cultivation 64 per cent is irrigated from permanent wells which however can only water some 72 per cent of this area in any one year temporary wells partly protect 4 per cent more and 22 per cent of the whole is manured Tenants hold *at least* 23 per cent of the cultivation most of whom pay only a nominal rent to the owners while strangers own or hold in mortgage 9 per cent more Only 18 per cent of the cultivated area is in the hands of good cultivators while the remainder is held by quite the worst in India six per cent of the owners abstaining from manual labour of every sort. Appliances and cultivators alike are barely equal to the needs of the cultivation being abundant in the Jat and Ror villages but in marked defect in the others the appliances for irrigation also are specially insufficient The population especially in Jat villages is disproportionately large and as it is increasing rapidly while there is little or no room for profitable expansion and as the relief now afforded by cultivation in other villages will gradually be withdrawn distress must certainly ensue even if it be not already present. The sub division of holdings caused by over population is enhanced by the adhesion to the Mahomedan law of inheritance of a considerable Saiyad community

761 About a quarter of the tract was held in direct management by the Mandals till the settlement of 1847 the remainder suffered for 25 years cruel over assessment and the relief afforded in 1842 was found to be insufficient Throughout the whole tract the demand has had to be reduced considerably since settlement. Meanwhile though the cultivation has increased by some 4 per cent the masonry wells have slightly diminished *in number* while 6 per cent of the irrigation the most important element in Khadir cultivation has deteriorated from permanent to temporary The cost of production has increased largely and the average yield must have somewhat decreased but prices have risen by a quarter since settlement The Jat and Ror villages are on the whole prosperous except where the pressure of population is unusually great but some of the Taga many of the Rájput and all the Saiyad villages were greatly impoverished and sadly needed relief

762 In this circle a reduction of 8 7 per cent on the current demand has been given which the imposition of new cesses has reduced to a relief of Rs 4 4 per cent on the total burden The demand so increased forms 100 5 per cent of that given by the sanctioned rates and 99 7 and 10. 8 per cent respectively of the rent and produce estimates A re distribution of the demand was urgently called for and while in many prosperous villages the assessment has been raised much needed relief has been granted to a still greater number

763. Resume of Assessment—Panipat Bangar.—In Pánípat Bángar we have a tract of which 52½ per cent is cultivated, 1½ per cent has been lately thrown out of cultivation because it is either absolutely unculturable or only culturable in an usually dry year, 29 per cent is positively barren, and the remaining 17 per cent, which is shown as culturable, includes a good deal of land which is really not worth the labour of tillage The soil is naturally most fertile, and when not exhausted by overcropping, and not deteriorated by external causes, yields crops of the most splendid luxuriance But the faulty alignment of the canal and its distributaries and the excessive irrigation practised have water-logged the country, and called into existence two terrible evils—saline efflorescence, and swamp or soakage—which have not only rendered absolutely barren thousands of cultivated acres, but have seriously diminished the fertility of much of the remaining cultivation , while a system of ruinous over-cropping, partly due to the decrease in cultivation, and partly owing to the system of assessment adopted, has enhanced the deterioration Seventy-seven per cent is protected from drought by an irrigation which, though often uncertain in supply, yet can never altogether fail, and which is obtained with little or no labour and at a very moderate cost twenty-one per cent is manured More than seven per cent* of the cultivation is in the hands of the Skinners, and is cultivated by tenants at a rack rent, usually of the most cruel nature Of the remainder the greater part is cultivated by the owners themselves, but 6 per cent at the *very least* is held by tenants in excessively small holdings, while strangers own or hold in mortgage 3½ per cent Fifty-four per cent of the cultivation is owned by Játs, and 18 per cent by Rors, who are almost as good the Skinners own 7 per cent, and the remaining 21 per cent is held by Gújars, Rángars, and other equally bad cultivators The cultivators are on the whole equal to the area under the plough , but the agricultural appliances are not only insufficient, but are badly distributed, being most scanty where most needed The population in the injured villages is excessive, and is being rapidly decreased by emigration, while the cultivated area is already largely supplemented by land held in a neighbouring native state

764. The early assessments were exorbitant, but the spread of canal irrigation and increase of cultivation were attended by a gradual reduction of the demand , and in 1842, when canal irrigation had nearly reached its maximum, and the tract had, as Mr Sherer says, "obtained its highest point of prosperity," a very moderate assessment seemed to secure it from the possibility of distress But from 1850 up till now the history of a very large portion of the tract

*Note —Excluding villages, the farm of which has now lapsed

has been one of deadly sickness decreasing cultivation and diminishing fertility and the relief afforded has been tardy and insufficient While on the whole the cultivation has remained stationary an increase in some villages of 16 per cent has been counterbalanced by a loss of as much as 25 per cent in many others the population has throughout advanced upon the cultivated area and in a large portion expansion is impossible and further diminution of cultivation almost a matter of certainty The cost of production has increased largely and the cost of canal irrigation enormously while the average yield has diminished and prices have only risen by a quarter While the high villages which have not suffered are in the most prosperous condition the estates which have been most severely stricken by swamp and *reh* are in the most pitiable state and the villages of the tract include examples of stage intermediate between the two extremes

765 In this circle the demand has been increased by 1 4 per cent while additional cesses raise the enhancement to 5 3 per cent on the total burden of 1876 and to 6 2 per cent on that of last settlement The demand is 98 1 per cent of that given by sanctioned rates and 89 6 and 88 7 per cent respectively of the rent and produce estimates While many of the finest villages have had their demand very considerably enhanced liberal relief has been granted to the injured villages And especially the separation of a portion of the demand in the form of owner's rates has for the first time rendered it possible for those villages to reduce their irrigation in which that irrigation was most extensive and its excessive nature most deleterious It is probable that this reduction of irrigation will somewhat reduce the revenue of the circle below the estimates but the water thus set free will be available in the Nardak or elsewhere where it will bring in the same revenue as it would have done in this circle while its transfer from a swamp stricken to a thirsty tract will be an unmixed benefit to both

766 **Resume of Assessment—Karnal Bangar**—Of Karnal Bangar 47½ per cent is cultivated 1½ per cent is tottering on the verge of barrenness 27 per cent is absolutely barren while of the 24 per cent entered as pasture much is really not worth the labour of tillage The soil in all the lower parts of the tract is naturally fertile and when fairly treated and not deteriorated by external causes yields crops as fine as could be desired But the terrible evils of *reh* and swamp which have thrown hundreds of acres out of cultivation have forced the people to replace the loss where possible by bringing under the plough high arid tracts characterised by most of the features of Nardak cultivation and where this was impossible to exhaust their remaining fields by a system of the most ruinous over cropping These evils are ever

Resume of Assessment—Karnal Bangar

increasing, and if they are, in their present degree, of later date in Karnál than in Pánípat, they are in one respect more injurious, inasmuch as they more often hold out delusive hopes which lead to much fruitless expenditure of seed and labour Seventy per cent of the cultivation is protected from drought by an irrigation which, though often uncertain in supply, yet never altogether fails, and is obtained with little labour and at a very moderate cost 22 per cent is manured Tenants paying no rent to the owners hold at least 24 per cent of the cultivation, while strangers own or hold in mortgage 6 per cent more Játs and Rors cultivate 54 per cent, the remainder being held by Rájpúts and the like The cultivators are on the whole equal to the area under the plough, but the agricultural appliances are insufficient, while both are badly distributed, being most scanty where most needed The population in the injured villages is excessive, and is already being decreased by emigration, chiefly, at present, of the non-cultivating classes

767. More than a third of the tract was held by the Mandals in direct management till 1847, when it was assessed *fairly* enough, as the remainder also had been, after a period of exorbitant over-assessment, in 1842 But from 1850 till now, the history of almost every village in the tract has been one of deadly sickness, increase of swamp, and diminution of fertility On the whole, cultivation has increased by 6 per cent, but the area has been largely kept up by the substitution of bad land for good, while the irrigation which has increased still faster, has, with the exception of three villages, mainly extended where it was least wanted Nine villages have lost 26 per cent of their whole cultivation, eight more have lost 11 per cent, increase has taken place in seven villages only, population has throughout gained upon the cultivated area, while not only is expansion impossible in those villages in which it is most needed, but the productive area will contract year by year The cost of production has increased largely, and the cost of canal irrigation enormously, while the average yield has very greatly diminished, and prices have only risen by a quarter The villages may be classified as I classified those of Pánípat in section 725, and it is enough to say that, while the first class includes four villages only, and one of those over-peopled, the third and worst class comprises most of the estates, if not most of the cultivation, in the circle In the villages where progress has been made it was impossible to enhance the demand in anything like the same proportion, as almost the whole increase in cultivation was confined to two villages which now cultivate 7,905 acres against 4,270 at settlement, and it is evident that their assessment could not be doubled

768 In this circle the demand has been enhanced by 12 4 per cent, an increase which 12 per cent of additional cesses imposed since 1847 raised to 16 9 per cent on the burden of 1876, and to 19 7 of that

Resume of Assessment—Karnal Bangar

of last settlement. This demand is 106 8 of the demand given by the sanctioned rates and 10- 9 and 103 5 per cent of my rent and produce estimates respectively The detailed assessment has conferred the same boon in this circle as in Pánípat Bángar but the benefit of the separation of the owners rates will be even more valuable here than in that circle in proportion as the swamp is more extensive

CHAPTER XXIV—FUTURE WORKING OF THE SETTLEMENT

769. Future working of the Nardak and Khadir Settlement.—In the Nardak little difficulty should be found in the future working of the settlement In a year of total failure suspensions wil of course be necessary, for in such years and in such a tract it is almost literally true that *nothing* is produced But the present demand is distinctly moderate, the yield in a really fine season is very large, and in a fairly good season considerable, in proportion to the assessment, and there should be little difficulty in recovering suspensions after a single year of drought But when, as lately, a series of bad seasons follow one upon another, and for three years next to nothing is produced, I fear remissions will still be unavoidable It is impossible for the people to pay revenue when they are receiving nothing, and when the continued drain upon the Banyas has caused them to advance even the food necessary to support life with great hesitation, many of the cattle will have almost certainly died, and even a perfect season will not suffice to cover balances which have been accumulating for two or three years, and to restore the appliances of cultivation And the very existence of large pending balances in liquidation, for which the crops may be attached, makes the Banyas chary of advancing the capital which is at such times almost a necessity to the cultivators whose bullocks are dead I believe that a system of assessments fluctuating with the seasons might be worked with the utmost success in the Nardak, but unfortunately I did not conceive that it was even admissible to suggest such a system when I submitted my proposals I believe its introduction would, even now, be an unmixed boon to both the people and the Mandals, though my assessments are certainly lower than those which might be realised under such a scheme But I would earnestly hope that, if such a system be introduced, it may not take the form of an acreage upon the area cultivated The Nardak cultivator ploughs and sows with the first rain, long before any real forecast of the nature of the season is possible He first sows the lowest land, and then that which lies higher, as far as time and appliances will allow, and if the signs of the season appear favourable he makes strenuous efforts to bring as much land as possible under the plough Upon the rainfall which follows depends how much of the area sown will yield a crop, the lowest land being most certain, while in the higher land he only loses at most his labour and his seed But if to the loss of seed and labour is added the certainty that he will have to pay revenue on each additional acre that he sows, which he would not pay if he left it untilled, his expectation of a crop in the

The Bangar—Reduction of Irrigation

poorer and higher soils will no longer be worth the price he has to pay and much land will be left uncultivated that would otherwise have been sown on chance

770 In the Khadir the settlement ought to work well if due allowance be made for permanent injury from the canal and the river But in both this tract and the Nardak it must be remembered that those villages in which the proprietary community is small or does not cultivate itself and where a large body of tenants cultivate from year to year paying rent only when they do cultivate suffer far more severely in years of distress than those in which the whole body of cultivators shares the burden of the demand Such villages are not numerous in the Khadir and it is only when the unirrigated area is large that much loss ensues in the Nardak they are more common while irrigation is in many of them practically unknown My village note books contain very full particulars of the present circumstances of each village and will for years at least be useful aids in determining questions of remissions and suspensions

771 The Bangar—Reduction of Irrigation —In the Bangar circles everything will depend in the future as it has depended in the past upon the canal I have already described the immoderate irrigation which has been so long practised in this tract and to which I believe the evils from which it has so severely suffered to be in great measure due Nothing is more imperatively necessary than that some check should be placed upon the inordinate abuse of canal water But I think that there are many points which must be taken into consideration in determining the manner in which this check is to be imposed I have stated that all land actually watered from a well at or about the time of survey has been entered and assessed as well irrigated although it may also be irrigable or irrigated from the canal Under § 39 of the Canal Act this land is exempted from the incidence of owner's rates—an exception which seems to me not only unnecessary but pernicious as it puts a premium upon the substitution of a more or less injurious for a wholly harmless mode of irrigation Moreover the method of distribution of revenue adopted by the people has as explained in § 645 reduced it to a nullity Orders have been issued to deny canal water to all such land and in this way a certain small reduction in irrigation will be effected in a perfectly unobjectionable manner

772 The case of land which may be considered to be protected by existing well but which has been all along irrigated from the canal and has been recorded and assessed accordingly is very different It has been proposed to deny canal water to this land also But it will not be possible for the people in most cases to work these wells at once Stronger cattle will be needed and more of them and the wells themselves in most instances need repairs—often expensive

The Bangar—Reduction of Irrigation

repairs Now that the cost of canal water has been increased by 50 per cent, it is pretty certain that where wells can be worked they will be worked, though a little time will be needed to make arrangements If it is eventually found that canal water continues to be taken for land which is really protected by a well fit for use, it would be wise, I think, to refuse to supply it But the circumstances of each case should be carefully considered, and no general rule or average applied It was proposed to refuse water to a large part of the City of Karnál because the area contained sufficient wells to irrigate the whole at an average estimate of 20 acres per well But setting aside the question whether all the wells were really fit for use, it was found that, as a fact, very few of the wells had so much as 20 acres attached to them, the wells being, as often happens, crowded into the best part of the area, each well-owner holding a smaller area than the well could really irrigate, and the remainder of the area being without wells

773 Again, it has been proposed to limit the proportion of the area of each village to which water will be supplied, and especially to refuse water altogether to swampy villages In the first place, it is certain that under the new system irrigation will be reduced to some extent, and I believe that the reduction will be considerable Especially the swampy villages, in which a light fixed demand has been imposed, will find it to their advantage to contract their irrigation, and so avoid paying owner's rates in addition to the fixed demand Moreover, very much has been done, and is still being done, to relieve the tract The opening up of drainages has already been attended with marked advantage, and will, when complete, change the whole aspect of some parts of the country The curtailment of the supply of water by substituting delivery pipes for masonry openings, though I suspect that the allowance as at present fixed is too small and in many cases involves real hardship, does great good by teaching economy in the use of water, and no doubt as the system is completed and experience gained, more attention paid to the requirements of individual villages will remove all grounds for reasonable complaint The new rules about bedding out irrigated fields will also greatly reduce the waste of water, and the new system of distribution which will be set in operation directly the canal is open will in numberless ways work a change for the better in the condition of the canal tract Under these circumstances I would urge that before any heroic remedies are adopted, we should wait to see how far the improvements we have introduced and are still introducing will supersede the necessity for more sweeping measures, which must of necessity be productive of great individual suffering

774. Especially I would demur to the immediate refusal of canal water to swampy villages In the first place, it is not the

The Bangar—Reduction of Irrigation

amount of water taken by the village itself that makes it swampy It lies in a drainage line the whole neighbourhood is water logged the rain water instead of sinking in when it falls runs off and fills the hollows and the actual irrigation of the village itself can have only the very smallest influence upon its condition Again as I have before remarked much of this swampy land will grow nothing worth growing
here is if
hat a full
Finally
in many of these villages in which swamp has been most largely developed the cultivation left to the people bears such a small proportion to their number that anything that reduces the yield must render it insufficient for their support The following are the *a erage* figures for some of the worst villages Of course individual holdings are often smaller still —

N me of ll ge.	Pe centage of p es t ul t at n n that f 184	Cultivated Acres		Annual net p o d c p rad lt m l gr lturist at 5 time Go rnment enue
		Per Soul	P d lt male ag lt st	R a p
Ph l k	80	0 6	3 6	41 4 0
Kamb hpura	57	0 6	3 0	31 10 0
Dadlána	38	0 6	2 7	24 1 0
R pur	90	0 5	6	27 10 0
As n kal n	75	0 6	3 2	41 0 0
Al p r	102	0 5	2 7	37 0 0
B holi	42	0 7	3 8	44 2 0
Madlaud	63	0 5	2 9	51 11 0

Out of the money entered in the last column all the costs of cultivation have to be met including occupier s rates and the cultivator and his family have to be supported

775 I hope I shall not be misunderstood I admit that the evil is so great as to justify almost any measures that would secure its removal and that if this end can be secured in no other way the interests of individual villages must be disregarded when they conflict with the good of the Tract as a whole But I believe that the new system of owner s rates and the new alignment of the canal will of themselves secure almost all that is needed or if not will at any rate go a very great way towards it I am sure that if we only let the people

The Bangar—Reduction of Irrigation

gradually reduce their irrigation for themselves, the reduction, so far as it goes, will be effected with infinitely less economical disturbance, and will be attended by infinitely less hardship to individuals, than would ensue if the same reduction were effected by the action of Government, and I do think that it will be wise to wait a few years, and see how matters stand when the new system has got fairly into train, before we resolve upon an interference in which innumerable details with which we cannot possibly be acquainted must of necessity be disregarded And I would deprecate the general application of any broad general rules, estimates or averages, for the circumstances and requirements of the villages vary from one to another, and nothing but local knowledge can foretell the effect of a general measure in individual cases Were canal irrigation being introduced for the first time, the case would be very different But we have allowed the present system of irrigation to grow up under our authority and sanction, indeed, I have no hesitation in saying that, before its evil results became apparent, we actively encouraged it by our very natural endeavours to increase our canal revenue, and we are bound to retrace our steps as gently and with as much consideration for the interests which we have created as is compatible with our duties to others

776 Finally, I would deprecate, for the next two or three years, the enforcement of the rule laid down in No 160 J of 12th January 1874, from Secretary to Government, Irrigation Branch, that a village not taking water for two years should *ipso facto* lose all claim to its supply in the future The owner's rates are a new experiment—new to the people at least It will be necessary for them to try the new conditions under various circumstances before they decide what degree of irrigation will best repay them at the enhanced price I think that for a time they should be allowed every possible freedom in making these experiments, and that a village even which resigns its claims to water should not be held to have forfeited it, as has been held in some instances The canal officers say "we have been longing for years to refuse water to that swampy village Now that it has given us the chance, why should we not take advantage of it" I think that in enforcing the rule I refer to they only defeat their own aims A village dare not give up water if it feels that by doing so it loses all chance of getting it again I believe that if for the next four or five years the people were encouraged to reduce irrigation, and assured that they should have the water again if they wanted it, the evental reduction of irrigation would be greater than could be arrived at in any other way It is perfectly true that, as the Financial Commissioner remarked, the people cannot be allowed to retain a lien on water to be used only when it is most valuable, but the liberty I propose would not be permanent The irrigation will, for a few years to come, be passing through an

Reduction of assessment upon reduction of irrigation

experimental stage the results will undoubtedly be to reduce irrigation and I believe that the greater the liberty of experiment given the greater will be the reduction finally arrived at. I am quite aware that there is no legal right to a supply of canal water I refer only to that equitable right which has been so often recognised and insisted upon by the Punjab Government.

777 **Reduction of assessment consequent upon reduction of irrigation** —It may in some villages be determined to reduce the supply of water or rather the area to which canal water is to be supplied And even if an attempt be made to irrigate in every case the same area which was formerly irrigated it is all but certain that in the remodelling of the whole scheme of distribution some cases will occur in which it will be impossible to effect this object. In many villages irrigation might be reduced to almost any extent and the fixed demand would still not be too heavy But in very many villages any material circumscription of the irrigated area will entail a corresponding reduction in the fixed demand As I have already explained the fixed demand is in *most* case *not* a dry demand but includes a part often very considerable of the assessment upon irrigation and which cannot be paid without that irrigation As the Financial Commissioner said in reviewing my Panipat Assessment Report it will certainly be necessary to revise the fixed assessment now being made on these principles in high and dry canal villages if their supply of canal water be ever hereafter seriously reduced for owing to the fixity of the proportion of the occupier's rates to be taken as owner's rates the dry assessment in such villages will not be a true dry assessment, but only the balance of a half assets assessment on the old fixed system after allowing for the sum to be taken as owner's rates calculated at half occupier's rates But even this I think falls short of the whole truth As explained in § 742 *supra* my fixed demand being framed to suit individual fields ceasing to irrigate and not whole villages without irrigation includes in *almost all* villages and not only in those which are high and dry a portion of the irrigated assessment for the whole village—a fact explicitly recognised by the Financial Commissioner as quoted in that paragraph Thus *theoretically* it is only in villages referred to in § 749 in which a true dry assessment has been made that the fixed demand is independent of irrigation But of course in very many more villages irrigation might be very considerably reduced in practice without entailing a reduction of demand while it is only in those in which the fixed demand is high in proportion to the true dry assessment that any reduction whatever of irrigation would leave the fixed demand too heavy

778 In its final orders on the Panipat Report Government remarked — It may be necessary if water is withdrawn hereafter to give reductions of the dry revenue assessed on some estates but this cannot be told with certainty until the distribution of the revenue over

Reduction of assessment upon reduction of irrigation

the village lands has taken place, after which it will be possible for the Settlement Officer to note how far he considers the dry assessment to be too high" I would venture to submit that no method of distribution can affect the ability of a village to pay without irrigation, an assessment of which a considerable portion is based upon, and only justified by the existing irrigation Take the village of Isrána, quoted in § 747 That village has 2,250 cultivated acres, of which half are irrigated Its fixed demand is Rs 4,400 It would be absolutely *impossible* for it to pay anything like this sum without irrigation, and *any* sensible reduction of irrigation will entail a reduction of demand It has distributed its assessment evenly over its cultivated area, at the rate of, say, Rs 2 an acre, so that a man owning 10 acres will pay Rs 20 But this will be possible only because irrigated and unirrigated land are distributed with tolerable equality among the owners, so that, roughly speaking, 5 of his 10 acres will be irrigated, and 5 unirrigated, and a great part of the Rs 10 which falls on the 5 unirrigated acres will be paid out of the profits of the 5 irrigated acres If the people had imposed Rs 3 on irrigated and Re 1 on unirrigated land, it would still have been as impossible for the owner of the 10 acres to pay his Rs 20 if water had been refused to two of his five irrigated acres, as it would be in like circumstances under the present distribution

779. I have, in accordance with the directions of the Financial Commissioner, carefully reviewed my assessment of each village of the canal tract, have estimated roughly how much of the fixed demand I consider to be assessed on the present irrigated area, have tabulated this assessment, its incident upon the canal area, the area shown as canal irrigated, and the average past irrigation, and have classified the villages according as reduction of irrigation might be made to a greater or less extent without entailing reduction of demand The general result was, that in 23 villages the fixed demand could be paid without irrigation at all, in 43 more, irrigation might be very considerably, and in 13 more, less largely circumscribed without necessitating revision of assessment, in 21 more any very material reduction of irrigation would call for corresponding relief, while in the remaining 36 the fixed demand was so high that it could not be paid in full unless the supply of water was kept up, practically speaking, to the present standard The result of this review has been added in the form of a "canal note," at the foot of my assessment remarks in the village note-book of each village, and should be of use if the question should arise in the future But it must be remembered that my remarks are based upon the present condition of the tract, that it is quite impossible to foretell what effect diminution of irrigation will have upon any estate, especially when combined with the wholesale remodelling of the canal system, and that a village now advantageously moist may be left by the change of canal so dry, that its fixed demand may become higher

in proportion to its true dry assessment than I now consider it to be or *vice versâ* Too much caution cannot be exercised in acting upon such opinions formed as they were under circumstances other than those to which they may have to be applied And it must be remembered that my remarks apply only to the fixed demand considered with reference to the physical capacity of the village to pay revenue The important question of the effect of reduction of irrigation upon the capability of the village to support its inhabitants was not taken into consideration as it did not fall within the scope of inquiry

780 Reduction of demand consequent upon change of flow for lift irrigation—The fixed demand having in many villages taken the form of the balance of the total assessment after deduction of owner s rates estimated upon the basis of past occupier s rates it is obvious that where that balance is in excess of the true dry assessment any future substitution of flow for lift irrigation should in theory entail a reduction in the fixed demand of the exact amount by which the change will enhance the owner s rates demand so as to leave the total demand unaltered Take our typical village *A* discussed in § 744 The respective a sessments supposing *A* to irrigate by flow and lift will be as follows —

	By flow	By lift
Surplus after deducting cost of dry cultivation and labour of flow irrigation	R 8 000	R 8 000
Occupiers rates	2 250	1 500
Extra labour of lift irrigation		750
Net profit	5 750	5 750
Assessment at half assets	2 875	2 875
Deduct owners rate	1 1 5	750
Fixed demand	1 750	2 1 5

It is here assumed that the gross yield of flow and lift irrigation are equal if there is a difference it is in favour of lift irrigation as water is used with greater moderation when it has to be raised while land which can only be irrigated by lift is generally raised well out of the reach of injury insomuch that *dál ka samana* or land watered by lift is often used by the people as synonymous with land free from *reh* and swamp It is also assumed that the cost of the additional labour necessary for lift irrigation exactly equals the reduction in the rates for the rates are adjusted with this view But in reality the labour set free by a change from lift to flow irrigation can hardly be utilised in any profitable manner and the chief difference between the two cases is that in one the men have more useless leisure than in the other But even accepting these two assumption it is still obvious that if our village irrigating by lift is assessed at a fixed demand of Rs 2 125 and the whole irrigation is then changed from lift to flow the fixed demand should be reduced to

Rs 1,750, so as to leave the total assessment unaltered The enhancement of the occupier's rates due to the change is supposed to be compensated for by the saving in labour, but it remains to compensate the village for the enhancement of the owner's rates, which is simply due to the accident that those rates, being of the nature of assessment, vary with rates which represent cost of water

781. But of course only a few villages do irrigate a large proportion of their area by lift, small changes would need no allowance, and where the fixed demand is already moderate in relation to the true dry assessment, no reduction would be needed I have therefore, in the course of the review described in § 779, selected those villages in which a reduction would appear to be needed in the event of flow being substituted for lift irrigation to any considerable extent, and I have calculated and shown opposite each the amount of reduction which would be entailed by the whole of the lift irrigation being so changed Proportionally smaller changes, if they are sufficiently considerable to call for any reduction at all, will entail proportional reduction This information has been added to the canal note already mentioned as having been entered in the village note-books There are only 22 villages in which this point is worthy of consideration, and if the whole lift irrigation in the tract were changed to flow, the total consequent reduction in fixed demand would be only Rs 3,550 Of course, exactly the same considerations which would render a revision of the fixed demand necessary in some few villages, if a change in the nature of the irrigation should raise the occupier's rates, will necessitate a similar revision in all those villages in which the fixed demand differs materially from a true dry assessment, in the event of the general scale of occupier's rates being either raised or reduced

782 Rents and Owner's Rates—The Punjab Tenancy Act was framed before the owner's rate system had been introduced A good deal of the Canal Act is more easily applicable to a canal just going to be started than to an old-established system of irrigation, and both are based upon an occidental conception of rent which is at present very foreign to the ideas of the people in these parts I fear some little difficulty will ensue To begin with we have the anomaly that it practically lies with the tenant to determine the amount of rates which are payable by the owner Suppose a landlord has five acres of land cultivated by a tenant Under the old system it was assessed at Rs 2-8 an acre, and the tenant, as usual, paid the revenue only, amounting to Rs 12-8 I have now assessed it at a fixed demand of Re 1-8 an acre, or Rs 7-8 in all, on the supposition that the owner's rates will average Re 1 an acre more Now, if the tenant is allowed to continue to pay revenue as before, he will perhaps be held responsible for the owner's rate also, though I know at present of no legal authority under which the landlord, who is by law primarily respon-

sible for it could exact it at any rate now that it has been ruled not to be land revenue.* But in many villages the landlords have refused to allow their tenants the advantage of the reduction in the fixed demand and have insisted upon the full Rs. 2-8 an acre as usual. If then the tenant sows sugarcane only in the whole of the five acres, which he can easily do if he owns other land also of his own, the landlord will have to pay an owner's rate of Rs. 2-8 an acre while he will receive from the tenant only Re. 1 or the difference between the old and new fixed demands. In fact the tenant can concentrate his best crops on the land held in tenancy rather than on his own land and cultivate them in great part at the expense of the landlord.

783. If the tenant has no rights of occupancy, some sort of yearly agreement and account will be necessary—a proceeding very foreign to the present practice of the people. If he has rights of occupancy, the Local Government has power to impose some part of the owner's rate on the tenant under § 41 of the Canal Act. But no rules have yet been issued, and whatever proportion of the rate is thrown upon the owners, it will still remain for the tenant to decide at pleasure whether the rate of which the owner will pay a proportion shall be Rs. 2-8 or Re. 1-2 an acre.* If the rule of the Local Cess Act is followed, a rule never yet acted on in the Tract, as all occupancy tenants have hitherto paid revenue and cesses only, the patwari will have to decide, when he draws out the half-yearly *báchh* papers, to what extent the rent of each occupancy tenant is favourable; and when the amount of rent is disputed (and at the present moment it is disputed I believe in every individual case) he will be in a difficulty. No decree for enhancement under the Tenancy Act would seem possible, as the customary rent paid by tenants at will in the canal tract is revenue and cesses only. I firmly believe that in the course of some years the rents paid by tenants at will will be raised pretty generally, as I have explained clearly to the owners that this is an essential preliminary step to their deriving any profit from occupancy holdings owned by them. But till this change has so far progressed that a custom has been established under the Act, no enhancement is possible. I have advised the owners to let the occupancy tenants *for the present pay the new fixed demand and the owner's rates*, and eventually to sue for *málikána* in addition, and this is the only method I can discover by which serious difficulties would be avoided. Whether they will follow my advice remains to be seen. The rise in the rents of tenants at will will I fear cause some distress at first, for a large proportion of the tenants' holdings are so small that any encroachment upon the profit they derive from them will render it insufficient to support them, and they will in many cases have to give up the land.

* Since I wrote the above rules have been framed under the Canal Act to regulate the respective responsibility of owners and occupancy tenants for owner's rates.

CHAPTER XXV—CONCLUSION

784. Results of the Settlement—If the results of the settlement be looked at from a strictly financial point of view, they must be pronounced unsatisfactory An assessment of Rs 5,39,726 has been raised to Rs 5,40,516, and the annual Government demand for revenue not assigned, excluding Rs 13,217-7 quit rent the amount of which necessarily remains unaltered, has been raised from Rs 4,30,546 to Rs 4,46,841-8, being an annual increase of Rs 16,295-8, or of Rs 4,88,865 for the term of settlement The net cost to Government has been Rs 2,61,230, so that the increase in Government income pays only 6 24 per cent on the expenditure But enhancement of revenue is not the only object of a settlement The history and description of the various villages detailed in the foregoing pages will show what grievous need there was that the demand should be re-distributed It has seemed to me that in all the earlier settlements, even when the assessment was in general moderate, fine villages were, broadly speaking, assessed too lightly, and poor villages too heavily during a period of 30 years the fortunes of individual villages must so vary as to render a revision of the demand a mere measure of justice, and in a large portion of this tract special circumstances have caused such changes to occur in a very unusual degree In map No X all the villages in which the demand has not been either enhanced or decreased by more than 5 per cent are painted blue, and a glance at it will show how extensive have been the alterations made in the burden of the revenue But a settlement does much more than revise the total amount to be demanded from a village It also re-distributes that demand over the individual revenue-payers The 10 per cent limit applied to revision on account of both river or canal action has, in a vast number of cases, effectually prevented individuals from obtaining any relief whatever for very serious injury, and men have gone on paying revenue for years for land which has ceased to exist, at least in a culturable form So, too, those who have prospered and been able to break up new land have, in the vast majority of cases, borne on this account no additional share of the burden on the village All these inequalities have been remedied at the new settlement, while arrangements have been made which should render their recurrence almost impossible

785. The old record of rights was, considered as a record of existing facts, exceedingly imperfect The old maps were made by eye only and not by survey, and were of very little use in deciding boundary disputes, while the pasture land was often not measured at all, large blocks being entered as "about so many bighas" The

record of cultivation was sufficient for all practical purposes at the time but the number of fields has increased since then from 39,682 to 910,356 the outlines of the old fields having in many cases wholly disappeared and no attempt had been made to keep up any *sort of record of these changes* The *number of proprietary holdings* has increased from 18,760 to 21,444 of cultivating holdings from 33,909 to 89,445 and though the annual papers should have recorded these holdings as they stood yet they failed grievously to do so while in the settlement papers on which they were based only one man of each family had been recorded as representing the whole of the owners. The administration paper was scanty in the extreme and though it was subsequently supplemented in some respects by provisions added by order of the Sadr Board yet its defects of omission occasionally worked serious injustice and markedly in the matter of the re distribution of the revenue An administration paper has now been framed as complete as I could make it after the most careful inquiry and discussion.

786 *And the last* and perhaps the greatest benefit which has been bestowed upon the Tract is the abolition of the old system of irrigated assessment which held out a premium upon where it did not practically compel the most ruinous system of over irrigation and the substitution of a scheme under which the demand will adjust itself to the irrigation and from which the most beneficial results may be confidently looked for in the shape of a more reasonable and moderate use of water The appointment of zaildars and chief headmen will afford valuable assistance to the authorities in the administration of the district while the remodelling of the patwaris scheme will enormously facilitate the maintenance of the records in such a condition that a future revision of settlement shall be a comparatively simple and inexpensive operation A real survey having been now made it should be sufficient at next settlement to fill in the changes which have taken place without any general survey of the whole village while if the yearly papers are prepared as they might and should be the revision of the record of rights should present but little difficulty

787 I believe the people are thoroughly well content with the settlement. At the same time I cannot think that I have purchased that contentment by the easy but dishonest method of sacrificing Government revenue I have striven to show fully in this report the grounds upon which I have acted in each large question that came before me and to set forth in it all the facts that can aid my superiors in forming their judgment upon that action But I have certainly been guided throughout by the understanding that Government while expecting that a Settlement Officer should to the best of his ability hold the balance fairly between the fisc and the people and should take care that the *facilities of a light assessment do not*

tempt him to deny the State its due share of the profits of the land, does most distinctly instruct him that where doubts arise and there is danger of error in one direction or the other, he should, in the interests of *both* parties, decide the point, not in favour of Government, but "on the side of the zemindar"

788 **Notice of Officers.**—It only remains to record my obligation to the various officers who have worked with and assisted me, and to whose efforts is due much of whatever merit the settlement may possess To Munshi Gobind Sahai I am under special obligation, as his intimate knowledge of the details of settlement work has been, especially at first, of the very greatest assistance to me As Extra Assistant Settlement Officer, and still more especially as Superintendent, he has worked very hard and very carefully, and I have always been able to feel sure that special work entrusted to him would be done thoroughly and well Munshi Khádim Husen has also done excellent work The Karnál Office was in a thoroughly bad state when he took charge of it, and the work much behind hand He got things into order, pushed the work on, and completed it rapidly and at the same time well Pandit Beli Rám, Deputy Superintendent, and one of the cleverest men on my Establishment, worked most admirably at Pánípat, and it is to him and his colleague Ahmad Bakhsh that what I venture to call the excellence of the Panípat record is chiefly due He has been appointed Sadr Qánungo in the district, and his intimate knowledge of all that has been done in the settlement should render him invaluable to the Deputy Commissioner Lála Kripa Rám and Maulvi Muhammad Ibráhím, Deputy Superintendents, have done very good work, and earned my thorough confidence, while Lála Thákur Dás has fallen but little short of them Lastly, Mufti Ahmad Bakhsh, while his industry and carefulness have been worthy of all praise, has, by his lovable disposition and transparent integrity, won the esteem, not only of his superiors and subordinates alike, but also of the village people, to whom a reference to "Mufti ji" was always a guarantee that their difficulties would be patiently heard and impartially solved

APPENDICES

APPENDIX A

Abstract of the customs of the Mandal Family

(See § 529 and preceding sections of the Report)

1 **Arbitrators of 1848** —In 1848 the four heads of the family—Ahmad Ali, Ghulám Sharf Muhammad Ali and Rahm Ali—referred their differences to arbitrators of Patiálá and Samáná acquainted with the family The arbitrators after great delay filed a decision dated 6th May 1849 which was immediately objected to so far as it concerned the succession of sons and the Commissioner suspected undue influence or worse and apparently over ruled it

2 **1st Code of 1850** —On 1st April 1850 the four chiefs affixed their seals to a code of rules which they agreed should in future regulate the affairs of the family But the Lieutenant Governor pointed out discrepancies in the code and doubted the legality of certain of its provisions and forwarded a petition from the son of one of the chiefs objecting to it Especially he declined to sanction a clause which would have freed the grant of liability for Government revenue and fines The whole matter was therefore referred for re consideration

3 **2nd Code of 1850** —Another administration paper dated 30th October 1850 was therefore prepared but it contained many disputed points It was submitted to the Lieutenant Governor at Delhi *and he disallowed some of its provision as being both at variance with* Mahomedan law and new as regards the customs of the Mandal family directed that the remaining clauses as to which all were agreed should hold good and referred it back for a reconsideration of the disputed points Unfortunately the points disputed by the Mandals *and disallowed by the Lieutenant Governor taken together embraced* almost all that was of value in the deed The paper was signed by Ahmad Ali in his own behalf and that of his ward Shamsher Ali a minor by Ghulám Sharf Rahm Ali and Muhammad Ali these being all the existing sharers and all the points on which any one *of them dissented from the provisions of the code are noted in the* abstract of custom given below —

4 **3rd Code of 1852** —In December 1852 a third draft was submitted to the Sadar Board but some few minor points were still

ever inherited Muhammad Ali left a widow and daughters and the brother inherited by decree of court and in the case of Láli Begam *vs* Azmat Ali (13 *Panjab Record* 1875) the Chief Court found that by custom of the Mandal family widows do not inherit Muhammad Ali s widow obtained a decree for Rs 360 a year as maintenance

8 Succession of Sons—This is the point upon which all the serious disputes of the family have arisen Legitimate sons are divided into *asli* and *ghair asli* according to the rank of their mother given in the last paragraph The points in question are—(1) the claim of the eldest son to take the largest share as chief (2) the claims of *asli* sons to take more than *ghair asli* sons (3) the claims of illegitimate sons In 1849 the arbitrators declared that the Mahomedan law did not rule the inheritance of the family and in 1851 the Mandals admitted that there was no real family custom on the subject

9 The arbitrator and all four codes agree that grandsons take by representation the share of a father dying in the life of the grandfather and this has never been disputed

10 The arbitrator held that by usage the eldest legitimate son succeeds to the chiefship if none the eldest illegitimate son If there are no issue the nearest of kin They do not state clearly whether the property goes with the chiefship but the decision was taken as involving this and was vigorously objected to Rahm Ali and Muhammad Ali declaring that all sons should share equally It was this point on which the Commissioner was of opinion that the arbitrators had been tampered with

11 The code of 1850 declared that of two legitimate children the elder took two thirds of more than two the eldest should take half and the rest equally But that when there were both *asli* and *ghair asli* sons the *asli* ranked senior to the *ghair asli* without regard to age and that in the equal division each *asli* son took a quarter more than each *ghair asli* If there were no legitimate sons the nearest of kin in the male line inherited according to the above rules as though they had inherited directly from the common ancestor In the absence of legitimate collaterals in the male line illegitimate sons succeeded but were otherwise only entitled to maintenance If none then daughters and if none widows This was agreed to by all the chiefs but Qutbuldín the son of Ghulám Sharf objected that the eldest son took the whole

12 The second code provided as above but added that each illegitimate son should have one sixth of the net inheritance as maintenance To this Rahm Ali objected that all sons shared equally the eldest taking a small additional allowance only say one twenty eighth Rahm Ali proposed that *ghair asli* sons should rank as illegitimate and that the eldest son should only take one tenth

extra The Lieutenant-Governor disallowed the clause as based neither upon law nor upon custom

13. The third code provided that, of legitimate sons the eldest should take Rs 1,000 extra, and the rest be divided equally between them, the eldest son of the first wife being held to be the eldest without regard to age If no legitimate sons, then illegitimate sons succeeded as above, otherwise each illegitimate son took one-sixth of the net value of the property in cash as maintenance for him and his mother, to be inalienable, and to revert on their death If no male issue, the inheritance to go as by the first code But the fact that Amír Ali, the eldest brother, took the whole of his brother Sultán Dín's share, he dying without male issue, is given as an example (*sic*) to this last clause In preparing this code the Collector declined to allow any distinction to be made between *asli* and *ghair asli* sons, as he said the Lieutenant-Governor had refused to sanction it But, as a fact, the first wife would always be *asli* Rahm Ali objected, and proposed that the eldest should take a quarter and the second son a twelfth of a share more than the others All agreed to this

14. The fourth code agreed with the third, except that the eldest *asli* son took the Rs 1,000, and that the example was not given But Rahm Ali objected that *ghair asli* sons should only take three-quarters as much as *asli* sons, and that illegitimate sons should take nothing A note of the proceedings would appear to show that he also repeated his objection to the third code, but this is not shown on the face of the code

15. In the above codes legitimate sons are defined as the sons of wives, including married prostitutes, and illegitimate as those of concubines Nothing is said as to the status of a son of an unmarried woman legitimatised by acknowledgment under Mahomedan law

16. The three original grantees divided the estate by consent as follows, on the basis of the estimated value of Rs 40,000 Rs 12,000 to each, Rs 3,000 to Mahamdi Khan as chief, Rs 1,000 to Isháq Khan on account of his distinguished character Isháq Khan's property was divided by arbitration, the eldest son getting Rs 1,000 more than the other But on Sultán Dín's death without sons, his whole share was taken by Amír Ali, the eldest brother, by consent of the others, and on the ground that the two brothers had held jointly, and, relying on this precedent, Rahm Ali refused on Wazír Ali's death to acknowledge Shamsher Ali's claim to half the joint property of Násir Ali and Wazír Ali, the two younger brothers who had also held jointly Shamsher Ali, however, recovered a half share by decree of court The three younger sons of Ghulám Sharf successfully sued their eldest brother for shares, but by consent

allowed him Rs 1 000 extra in recognition of seniority The younger brothers of Azmat Ali on the other hand obtained a decree for equal division

17 No distinction has ever been actually made between *asli* and *ghair asli* sons Ghulám Ali proposed to set aside the village of Sataundi for his three *asli* sons to the exclusion of Nijábat Ali but the proposal was not carried into effect. Nijábat Ali Rustam Ali and Umr Daráz Khan have all obtained proportional shares by suit. And it was held that Ghulám Rasul could have claimed a half share with Muhammad Ali if he had sued within time The Panjab Government in their No 587 of 21st August 1877 stated that they were not prepared to approve a rule limiting succession to *asli* sons

to a share Bishárat
a year as maintenance
the proceeds of a small
support

19 Sons born of concubines and legitimatised by acknowledgment have obtained shares even when the marriage of the mother was held to be doubtfully proved or actually disproved in the cases of Nijábat Ali Ghulám Rasul and Rustam Ali and Umr Daráz

20 This last case (No 13 *Panjab Record* 1875 and Judgment of Privy Council of 1881 in the appeal of *Nawab Muhammad Azmat Ali Khan* vs *Musammat Láli Begam and others*) is the
family It was then
heritance was proved
sons from inheritance
r brothers was proved
that no special custom regarding the inheritance of illegitimate sons was proved that sons of concubines legitimatised by acknowledgment although the marriage of their mothers might not be proved were *entitled to inherit under both the grants of 1806 and that of 1858 and* that the administration papers drawn up at various times were of doubtful force The Privy Council decided that the ordinary rules of the Mahomedan law were applicable to the case no custom to the contrary having been proved save as regards the widow It is clear from the judgments delivered that the Chief Court had not the whole of the correspondence which I have summarised above before it and it is by no means impossible that had it been more fully informed some of its conclusions might have been modified

21 **Power of Alienation and Bequeathal** —The arbitrators determined that any incumbent could during his life alter the succession by will and that on failure of direct male and female and collateral male heirs he could adopt a successor and bequeath to him

22. The two codes of 1850 provided that no sharer had any power to alienate any part of the grant or of the revenue thereof by will, mortgage, sale, or otherwise, any such alienation being wholly void and of no effect The second code added also that no part of the estate could be liable for debt beyond the life of the debtor, it also provided that, in failure of male and female issue and collateral male heirs, the incumbent could adopt an heir The Lieutenant-Governor doubted whether the entail set up by the first code was legal, but remarked that a proposal was before the Supreme Government to legalise such arrangements On the second code he remarked that there was "no legal enactment in support of the proposition, and that he did not deem it expedient to propose to the Supreme Government the passing of any such law" He characterised the proposed power of adoption in failure of heirs as "inadmissible"

23. On the last two codes Ghulám Sharf recorded that he had given the village of Sataundi to the mother of three sons, and after her death to her sons, to the exclusion of Nijábat Ali, the fourth son, and on the last code Ahmad Ali recorded that he had left Nisangh as an heir-loom to the chief or eldest son, and had given Barota to the mother of Azmat Ali and her sons after her These arrangements have been set aside by decrees of court In fact, it is very doubtful whether they were ever anything more than proposals

24 In 1862 the Commissioner wrote that he believed that the Government had prohibited alienation of the holdings in 1853 And again, in a report called for by Government in 1866, on "measures for the better administration of the Mandal tract," the Deputy Commissioner wrote —"In no instance have the *istamrári* rights been alienated There does not appear to have been any condition imposed by Government on this point Transfers, however, on two or three occasions have been interdicted by authority" I can find no record of any such prohibition Hitherto no permanent transfer has taken place, though the income of many villages has been assigned to creditors for a term of years by the district authorities in the exercise of a sort of irregular bankruptcy jurisdiction In 1838 it was ruled, in the case of Lála Shogun Chand, that the proceeds of these tenures could not be attached by Civil Courts in satisfaction of debt In this connection the question discussed in § 534 *supra* assumes a special importance, as, if the *istamrari* grant is held to be governed by Regulation Law, and to be a confirmation of a former grant by a native Government, there can be but little doubt that it is alienable,—a conclusion which, if made known to the Mandals, would lead to the immediate and final ruin of most of them

25 Right of Separation —It appears that in 1844, and again in 1845, the Commissioner ruled that Sultán Dín and Shamsher Ali, younger brothers, had no separate share of which they could demand

partition but whether or not on the ground that the eldest son inherited the whole does not appear The three last codes all provided that any sharer might separate his share at pleasure and the last two added that the partition would be made in proportion to the quit rent paid by each But on the first code Rahim Ali objected tha Shamsher Ali had no right to partition basing his objection however partly on a separate deed and partly on his assertion that Shamsher Ali had no claim to any share at all In his Minute of 1855 already referred to the Lieutenant Governor wrote — Different *members of the family may possibly wish to obtain an actual partition* of the lands belonging to their several sharers This must be left to the usual course of proceedings under the partition law

26 The three original grantees divided their property by consent by a deed dated 9th Jamadi ul awal 1215 Fasli and attested by the Resident of Delhi Muhammad Isháq s sons divided their property in accordance with an award at arbitration by a deed dated 9th Shaban 1235 Hijra The heirs of Ghulám Sharf obtained separation of rights in execution of decrees for possession of shares only as also did Shamsher Ali Khan

27 **Liability for quit rent** —The quit rent has always been divided by ancestral shares without regard to any extra share that *the eldest son may have taken Thus the three families pay* Rs 5 000 each (that of the head family being now remitted) and in Muhammad Isháq s family Muhammad Ali who took Sultán Dín s share pays Rs 2 500 and the heirs of Násir Ali and Wazír Ali Rs 1 250 each This was recorded and agreed upon as a permanent distribution in the last three codes So again the four sons of Ghulám Sharf pay equal shares of the quit rent though the eldest receives an extra share of the inheritance

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APPENDIX B.

Index to the Administration Paper

(See Section 627 of the Report)

Chapter I.—Relations of the Revenue-payers with Government.

Section

1 Assessment of the Government revenue, and the village revenue rates (*a*) *Assessment, and revenue rates* (*b*) *Land excluded from assessment* (*c*) *Progressive demand, and period of settlement*

2 Groves exempt from assessment

3 Protective irrigation leases

4 Land held free of revenue or on a fixed quit-rent—(*a*) *Detail of holdings* (*b*) *Items payable by holders* (*c*) *Resumption of tenures, and responsibility for new engagements*

5 Revenue assigned to non-owners—(*a*) *Detail of holdings* (*b*) *Items payable by holders* (*c*) *Resumption of tenures, and responsibility for new engagements*

6 Di-alluvion—(*a*) *Yearly inspection* (*b*) *General conditions of reduction* (*c*) *Conditions and rates of enhancement* (*d*) *Change of quality by deposit of sand, &c* (*e*) *Change of quality by destruction of wells* (*f*) *Total diluvion* (*g*) *Distribution of reduction or enhancement, and responsibility for new engagements*

7 Damage by *reh* and swamp

8 Owner's rates—(*a*) *Method of calculation and levy* (*b*) *Lands exempt from owner's rates*

9 Cesses—(*a*) *Detail of cesses* (*b*) *Revenue liable to them* (*c*) *Effect of remission or suspension of revenue* (*d*) *Method of levy*

10 Dues of zaildárs, chief headmen, and headmen—(*a*) *Detail of dues* (*b*) *Confiscation of dues*

11 Amount and manner of paying revenue—(*a*) *Manner of payment of owner's rates* (*b*) *Detail of fixed revenue* (*c*) *Instalments and place of payment* (*d*) *Manner of bringing to account remissions and enhancements*

12 Pay of village watchmen

13 Patwári's residence

14 Land in the perpetual possession of Government

15 Government rights in *kankar*

Chapter II.—Internal Relations of the Revenue payers

Chapter III.—Relations of the Revenue-payers with other people.

A—WITH OTHER VILLAGES

B—WITH VILLAGE OFFICE-HOLDERS

C—WITH VILLAGE MENIALS

D—WITH TENANTS

APPENDIX C.

STATISTICAL TABLES

Statement No I —*Showing* General Areas *in acres*

Details	Area in Acres						Percentages					
	Parg a K ·nál			*Pa·gana Pá p t*			*P g na Ka·nal*			*Pa·gana I ·n pat*		
	Nardak	Khá lir	Bángar	Khád r	Bánga	Total	Nardak	Khád r	Bángar	Khádir	B ngar	Total
Cultivated	38 ,76	8 8..	. 071	60 093	98 419	-58 19	4	51 5	48	56 4	5 1	4. 3
Lately abandoned	2 368	6 9	1 014	553	3 047	7 661	1 6	1 -	1 5	5	1 6	1 3
Gardens	.	490	411	4..	544	1 9	0	9	6	4	3	3
Dh·k jungle	31 413	894	197	8 1	9 391	47 616	0 7	5	3 3	8 ?	1 3	8 4
Other culturable	61 087	1 948	13 53	9.1	31 118	141 636	40 1	-3	0 3	-1 5	16 4	-4 9
Sal ne efflorescence	81	9 64.	8 94	1 158	33 8 .	46 651	1	4 ,	13 4	1 1	1, 8	8
Streams and swamps	4 3,8	1 ,98	4 65	2 64	10 6.6	24 1.6	2 9	.	, 0	5	5 5	4
Sand		1 547	1	2 0.	,	3 6,,		8	0	1)	0	6
Other barren	10 046	1 0 0	1 09.	2 ..5	3 743	18 143	6 6	1 8	1	1	0	3
Roads village s tes &c	3 881	3 058	656	5 ,61	5 6 .	0 981	- 6	5 5	4 0	5 4	3 0	3
Total area	15 085	55 91	66 605	106 588	189 425	5,0 61	100 0	100 0	100 0	100 0	100 0	100 0

Statement No II — *Showing*

		Nardak				Karnal Khadir			
		Dakar	Rausli	Bhur	Total	Dakar	Rausli	Bhur	Total
Cultivated Acres	Bricked wells	103	3 215	5	3 413	1 138	14 594	1 172	17 209
	Canal flow	170	131		301	365	983	18	1 [illegible]
	Do lift	197	684		881	7	302	9	318
	Unbricked wells					43	1 3[illegible]8	231	1 603
	Naturally moist					385	1,601	302	2 [illegible]91
	Dry	7,192	26 968	21	34 181	617	4,556	872	6 044
	Total	7,752	30,998	26	38 776	2 858	23 371	2,601	28 833
Percentages	Bricked wells	2 5	10 4	10 2	8 8	50 3	62 4	45 0	59 7
	Canal flow	2 2	4		8	12 9	4 2	7	4 7
	Do lift	2 5	2 2		2 3	2	1 3	3	1 1
	Unbricked wells					1 5	5 7	8 9	5 6
	Naturally moist					13 5	6 9	11 6	8 0
	Dry	92 8	87 0	80 8	88 1	21 6	19 5	33 5	20 9
	Total	20 0	79 9	1	100 0	9 9	81 1	9 0	100 0

Statement No III — *Showing*

Manure		Nardak Karnal			Khadir Karnal			Bangar Karnal		
		Permanently irrigated	Other cultivation	Total	Permanently irrigated	Other cultivation	Total	Permanently irrigated	Other cultivation	Total
Cultivated Acres	Near the village	797	1 175	1 972	991	259	1 250	1 057	72	1,129
	Manured	353	71	424	4 629	677	5,306	5 679	109	5,788
	Unmanured	3 445	32,935	36 380	13 276	9,001	22 277	18 087	7 067	25 154
	Total	4 595	34 181	38,776	18,896	9,937	28,833	24 823	7,248	32 071
Percentages	Near the village	17 3	34	5 1	5 2	2 6	4 3	4 2	1 0	3 5
	Manured	7 7	2	1 1	24 5	6 8	18 4	22 9	1 5	18 1
	Unmanured	75 0	964	93 8	70 3	90 6	77 3	72 9	97 5	78 4
	Total	11 9	88 1	100 0	65 5	34 5	100 0	77 4	22 6	100 0

Irrigation *and* Soils *i i acres*

K r	Bangar			Pan t Kha i				Panipat B ar				T			
Dák	Ba l	Bh	T t l	D k	Rausli	Bhur	Total	D kar	R ll	Bl	T t l	Dák	F l	Bl	T t l
1	2 1 5	16	2 412	3 1	37,511	1 6..	4 48	644	4 433						
6 23	6 4		11 98	119	1 847	12	1 9 6	11 18	39 619						
1 19	9 210	18	10 4 3	1	115		116	1 331	16 8 3						
					5 100	644	6 5	1	141						
4	16		0	6	3	41	8..								
4	6 6	216	7 9	98	6 0	1 6..	8 3 8	1 03	19 6 6						
40	4 41	..	3 0 1	4 60	51 316	3 9 4	60 003	14 61	9 32	4 4 0	98 419	37 0	209 8 3	11 3	8 193
3 0	8 9	6	7 5	6 0	73 1	40 7	0	4 5	5 6	3	5 3	15	29 5	8 2	27 4
0	27 6	2	37 4		3 6		3 3	8 1	40	48 6	53 9	40	23	19 4	26 6
16 1	37 7	7 0	3..			..	2	9 3	19 9	14 8	18 1	4	1 5	6 1	11 4
				14 7	10 0	13	10 6	0	2	2 0		0	3 1	7 7	3 2
1	1		1	1 ..	1 4	1 0	1 4				2	1	1 1	3 0	1
10 1	5 7	84 1	2 5	16 6	11 7	33 4	13 8	7 3	24 6	31 4	5	..3 0	30 3	35 6	30 2
23 1	6 1	6	100 0	6 0	6 4	6 6	100 0	14 5	81 0	4 5	100 0	14 4	81 3	4 3	100 0

Irrigation *and* Manure *in acres*

Kh di Pani			B Pani			T		
P ma ntly ir ig t d	Oth it t	T t l	P rm tly i ig ted	Oth ll tl	T tal	P rman ntly i i ted	Oth ll t	T tal
2 614	286	900	3,257	003	3 800	8 16	2,305	11 111
14 90	1 3 0	16 5	17 11	1 0	17 81	43 177	2 307	4 5 4
27 060	13 8 8	40 9 8	5 39	21 530	6 7 8	117 1 7	84 400	201 507
44 5 9	15 514	60 093	6 1 7	31	98 419	160 000	80 19	8 19
5 9	1 8	4 8	4 3		3 9	5	2 7	4 3
33 4	8 8	2 1	23 1	8	18 1	5 5	2 7	1 7
60 7	9 4	68 1	72 6	96 5	8 0	(9 3	94 6	8 0
7 42	5 8	100 0	3	2 7	100 0	6	31 5	100 0

Statement No. IV.—*Showing* Canal

		Year	Cotton	Sugarcane	Maize	Rice	Jawar	Bajra
Karnal Bangar	Canal areas	1865	1,593	533	36	7,155	651	
		1866	2,192	180	202	7,652	175	1
		1867	1,812	93	56	6,603	16	
		1868	2,518	320	188	6,788	2,240	2
		1869	3,016	665	187	9,163	1,[illegible]	1
		1870	3,786	315	82	9,097	231	4
		1871	1,653	179	82	6,621	82	
		1872	2,982	513	151	5,[illegible]81	108	
		1873	1,123	192	13	7,115	71	
		1874						
		1875						
		Average	2,273	570	121	7,275	577	1
	Settlement areas	Single crop, Double crop,	2,320	115	253	7,186	2,480	106
		Total	2,320	115	253	7,186	2,480	106
Panipat Bangar	Canal areas	1865	7,899	1,296		10,110	1,658	
		1866	12,171	2,048		12,590	1,150	6
		1867	11,167	2,855		8,425	118	4
		1868	9,111	3,185		7,367	7,796	28
		1869	11,121	7,129		8,048	7,773	35
		1870	13,296	5,564		8,765	2,175	89
		1871	12,474	4,522		7,225	666	11
		1872	9,519	3,231		9,590	388	15
		1873	4,790	5,355		8,651	166	4
		1874						
		1875						
		Average	10,212	4,665		8,957	2,869	21
	Settlement areas	Single crop, Double crop	7,466	4,685		9,390	13,916	710
		Total	7,466	4,685		9,390	13,913	710

Note.—The settlement figures here given are the preliminary

Irrigation from 1865 to 1875 in acres

Month	Wheat	Gram	Barley	Wheat and Gram	Barley and Gram	Miscellaneous and fodder	Paleo and Sulabi	Total area
	6	6 4	993		46	6	4 04	959
	8 ,C4	84	3 1		1C /	1 01	3 C9	353
	6 4 9	448	50		1 438	609	1 04	18 11
1/	130 ?	606	3		6 /	? 90	1 360	33 091
17	9 0C3	0	23	56	8 5	1 53)	? 36	50 104
14	9 060	645	43	2	1 6	? 515	9 /	30 6
-	9 841	1 001	1 C3		C	1 8/	9	4 004
	5 9 0	50	416		744	983	4 000	21 80
-	5 4 3	1 9	619		? 4	163	4 638	20 96
								90 8
								19 68
6	8 41	610	1 508	6	9	1 416	541	24 5 5
86	4,9 6	2,405	519	4	4	941		1 7
	? 4	1 647	1 355	2.4	315	11		6 80
86	/ 00	4 053	18/1	4 8	5	14 -		8 4
	22 917	1 01	494		4 14	099	5 44C	634 3
15	85 3	9 1	439		4 54	3 495	6 1 4	1 516
3	20 59	1,531	436		3 118	8 13	1	C31 4
50	56 35	?0 1	? 6C5		56	6 587	48	80 C33
4C	834	5C3	1 / 6		3 1C6	6 148	1 84	431
41	6 653	1 0	1 4C		C3	6 3	1 3	00 3
?C	6 413	1 656	1 68	64	3 68	6 096	8C8	C 4 0
11	11 68	3 3	488		1 869	4 044	4 C1	4 449
13	0 4	4	407	49	811	4 40	51 7	513 5
								48 189
								41 C69
3	3 4	1 3/3	11 1	3	913	4 669	3 108	51 894
59	161	64 6	1 19C	C 469		4 909		716 8
	1 / 6	4 6C	1 490	1 83	1 604	1 40		1 7 4
55	17 948	11 091	616	8 506	1 604	6 311		84 43

areas and do not correspond exactly with the final figure

Statement No. V.—*Showing* Rainfall *in inches*

Station	1866-67	[illegible]	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	1875-76	1876-77	1877-78	1878-79	Average
Karnal	17 1	33 0	16 3	19 0	32 1	33 1	33 0	12 3	13 1	35 8	21 9	21 0	21 3	29 0
Panipat	18 7	29 7	11 5	16 1	26 5	33 6	29 2	20 5	31 4	[illegible]	25 1	18 9	21 2	25 0
Kaithal	17 0	22 8	7 7	11 5	11 7	20 5	31 7	23 5	17 3	27 2	12 8	10 3	22 4	18 9

Rainfall at Karnal in inches

Year	April	May	June	July	August	September	October	November	December	January	February	March	Total
1862 63	0 1		0 7	16 0	3 8	11 4	0 2	0 1		1 9		1 0	35 2
1863 64	0 8		7 4	23 8	10 1	2 6	2 5	0 2	0 2	0 2	0 9	0 2	18 9
1864 65	0 9	1 0	0 3	5 4	8 6	2 4			0 1	0 7	1 2	[illegible]	25 1
1865 66	0 5	0 4	1 6	4 7	11 0	4 6			1 6	2 6	0 4		27 4
1866 67	0 2		3 2	6 9	4 7	0 2	0 9			0 5	0 2	0 5	17 1
1867 68	0 6	0 9	2 4	7 9	13 1	2 8			0 6	1 8	1 9	1 0	33 0
1868 69	0 7	0 1	1 1	4 6	0 1	1 3				3 1	1 1	1 2	16 3
1869 70				6 9	2 1	5 7	0 6				0 5	3 2	19 0
1870 71	0 7	0 6	8 2	5 1	6 8	5 0				1 1	1 6		32 1
1871-72	0 4	1 9	9 1	10 1	3 8	1 4			0 9	1 5	0 1	0 9	33 1
1872 73	0 2	0 6	8 1	12 7	7 3	2 1	0 1		0 9	0 6	0 1	[illegible]	33 0
1873 74		3 6	1 3	20 7	7 2	6 1	0 2		0 5	0 5	0 4	1 8	12 3
1874 75		1 1	7 6	18 7	3 4	7 1			0 2	0 3	4 7		13 1
Average	0 4	0 8	3 9	11 0	6 3	4 1	0 3		0 4	1 5	1 2	1 5	31 2

			C lt t d ar	Irrig t d	P t g l	P m t w lls	T mp ry w	† f pl gh	† f pl gh ttl	† f th ttl	†T tal p p l i n	†C ll tl d n p p l	†Ad lt m l c lti t rs	Cult t l by wn rs	Culti ted by oc p y t	C lt t d by t n t will	Culti ted by n n r d
N	A t als	181..-47 1 2 1 8 15"6	36 730 41 154	4 4..3 4 0 9	100 895 0 993	232 01		3 378	6 537	46 130	..3 50 37 000 4 ,578	14,6 3 2 710 20 407	4 0 5 7 0.3 9 073	27 405 ..3 531	3 2 9 2 16	5 938 10 106	3 103
	P g t	1 12-4.. 1553 1 08 1	90 100	90 100	11 100	3 100					56 87 100	65 71 100	53 80 100	96 100	140 100	57 100	
K Khr w	A tuals	1 7 18 6	71 9 453	1 90	17 6 16 4 3	808	2 3	2 6..	7 139	16 330	31 338	16 83	6 6 3	15 903 15 404	1 2 700	7 1 11 9 9	4 629
	P c t	191..-1" 18 6	98 100	94 100	107 10..	103 100	3 100				100	100	100	101 1 0	217 10..	65 100	
F D	A t al	1 1.. 4 16 6	30 3 3 811	1 21 7	1 4 1 93	1 "33		2 164	4,314	17 116	6 200	16 63..	6 2 0	1 3 3 24, 07	4 1 7 2 119	4 190 6 528	798
	P t	181 1 1 8	91 10..	8. 100	130 100	113 100					100	100	100	87 100	211 100	64 100	
F P	A t als	18 181 185 18	3 06 47 405 53 461	46 3 5 52 0	4 6 7 36 027 3 2 3	1 901 04.. 2 3 5	6 1 3 4 537	8 7 0 5	9 861 14,860	30 6 31 77	4 4 4 4 302 6 036	3 146 33 405	7 730 11 174	3 66.. 34,6 7	3 5 1 2 105	19 6 0 4,304	6 8 9
	P g t	18 1842 1 2 1 6	62 69 100	89 100	1 1 11 100	6 87 100	94 0 100	60 100	66 100	69 100	3 71 1 0	69 100	69 100	91 100	162 100	81 100	
B o P	A t ls	1 1 43 18. 2 1876	7 101 175 10 363	98 3 31	1 1 357 60 009 33 234			7,... 7 731	1 213 15 500	41 9.. 53 6 6	6.. 4 83 001 10 173	53 03 5 500	17 610 10 089	71 053 63 129	11 680 5 186	18 440 31 040	4 0 9
	P g t	18 3 18 18 2 18 6	74 63 100	66 100	314 15 100			94 100	1 1 100	0 100	68 87 100	93 100	0 100	113 100	22 100	54 100	

I th l mn th ty f Panip t l d lf m P ip t Khád
† I t se l m tl ty f P nip t is l ded f m Pánip t Khádir d th ity f K rnál f m Karnál Báng
N —Tl figures fo 1876 ar th so f tl p limina y areas d d t gr actly w th th fi l fi s

Statement No VII —*Giving a* Com-

		Nardak			Karnal Khadir			
		Class I	Class II	Total	Jats and Rors	Rájpúts	Others and mixed	Total
Actual figures	No of villages	23	51	74	6	16	25	47
	Total acres	24,448	127,670	152,118	5,883	18,605	31,440	55,928
	Cultivated acres	11,104	30,050	41,154	4,084	9,065	16,334	29,483
	Canal irrigation							
Percentages on present cultivated area	Total culturable area	195	375	326	120	161	162	156
	Permanent irrigation	32	5	12	84	53	72	68
	Temporary irrigation				5	4	4	4
	Manured	8	4	5	28	20	21	22
	Cultivated by owners	68	70	69	69	63	42	52
	Cultivated by residents	89	94	92	98	84	81	84
Appliances — Per 1,000 cultivated acres	Plough cattle	129	180	166	381	220	220	242
	Adult male cultivators	171	239	220	249	190	171	188
	Total cultivating population	520	689	643	768	574	517	569
	Total population	810	1,118	1,046	1,336	1,107	970	1,063
Appliances — Per wheel on permanent well	Plough cattle				8½	6	4½	5½
	Irrigated area				14½	14¾	13¾	14
Progress Percentages for corresponding items as they now stand	Cultivation, 1828							
	Cultivation, 1842-47	96	119	112	111	106	101	104
	Irrigation, 1842-47	123	89	111	150	100	101	107
	Permanent wells 1842-47	94	58	72	96	110	92	97
	Plough cattle, 1828							
	Population, 1828							
	Population, 1852	141	193	179	136	131	127	130
	Population, 1868	99	120	115	101	103	104	103

Note —For the method by which the villages are classed, see §723 of the Report for the two Bangars and §698 for cities of Karnal and Pánípat are excluded throughout from Karnal Bangar and Pánipat Khadir Class II in Karnal Bangar

parative View *of* Classified Villages

Karnal Bangar					Panipat Khadir				Panipat Bangar				
Class I	Class II	Class III	Class IV	Total	Jats	Gujars	Others and mixed	Total	Class I	Cla II	Class III	Cla s IV	Total
9	8	7	7	31	6	31	31	88	9	0	11	29	89
10 549	C 445	1, 1 9	0 83	54 9 6	39 0 5	35 930	? 504	97 509	5 61,	43 8	50 810	9 544	189 9
3 669	646	7 6 0	1 661	6 606	3 8	18 434	1? ,0	53 464	17	4 31	17 350	35 543	99 300
31 4	1 954	016	9 714	19,85?					0 481	1 ? 3	12 16	17 09	71 6
1 5	141	16	14	148	15	1 0	156	160	1	119	137	14?	13
8,	78	73	8	80	,3	,1	68	7	93	88	,4	6	7
					8	16	13	1					
16	11	11	18	15	34	27	30	31	6	1,	1	?	1
71	65	,8	84	,8		9	5	64	61	69	0	8	C
93	88	9,	97	96	8	85	80	89	95	96	98	95	9?
216	1	167	146	16	3 3	9	34	?78	169	153	151	15	1 6
5	153	19,	189	196	?30	01	154	06	16	181	196	18	19
80	415	6 6	60	6 5	,0	59	509	6 6	650	560	589	541	580
1 9	,68	10 4	9 4	988	1 9	1 059	9 7	1 111	1 18	968	1 066	9 6	10 9
					53	45	49	49					
					14½	15½	15½	1 ½					
					1 1	1 4	1 3	1 3	104	1	131	168	131
,4	89	113	1 0	106	11	110	1 0	113	80	10	107	116	101
0	110	1	140	115	11	100	1	1 1	85	113	1 7	11?	105
18	55	64	194	68	1 3	151	141	135	,	19	6	98	5
					155	13	1,6	15	0	77	105	97	86
					13	137	143	13,	1 6	1 4	196	168	14
99	141	4	196	138	143	13	143	141	99	110	1	1 1	115
91	101	109	101	101	106	11	113	109	93	97	98	107	99

th N d k l d tw Th fig h b t d ll b d p h h th p pl lm th ry b m l fl u d d f t l l ulat p d tly with th p d th fi lt l figu t Tl

Statement No VIII.—*Showing*

Name of assessment circle	Owned by	Plough-cattle	Cows
NARDAK	Landowners	4,838	9,060
	Cultivators	1,997	1,160
	Others	2	2,012
	Total	6,837	15,232
KARNAL KHADIR	Landowners	4,553	1,676
	Cultivators	2,586	1,064
	Others		544
	Total	7,139	3,284
KARNAL BANGAR	Landowners	3,020	2,049
	Cultivators	1,292	759
	Others	2	730
	Total	4,314	3,538
PANIPAT KHADIR	Landowners	12,236	4,103
	Cultivators	2,624	905
	Others		1,566
	Total	14,860	6,579
PANIPAT BANGAR	Landowners	11,491	6,457
	Cultivators	4,009	2,289
	Others		2,511
	Total	15,500	11,257

NOTE —The cities of Karnal and Panipat are

Buffaloes	Calves	Total kine	Sheep and goats	Pasturage in acres
7 894	11 44	33 66	1 55	
329	4	13 1 8	2 163	
8 5	3 3 4	6 943	10 100	
11 f 93	1 500	5 67	13 15	9 00
353	4 0	13 1	11	
9 3	2 184	6 80	8	
0	1 96	3 0	3	
946	8 500	3 463	6	1 4
3 9	4 616	13 04	3	
10 0	1 916	50	34	
503	1 819	30 4	34 1	
167	8 1	1 1 0	1 1	1 9
5 0	1	31 683	98	
934	2	6 90	44	
1 4	5 114	64	4 81	
80	01 3	49 7	4 3	31 0
11 081	19 86	49 1	197	
30 7	60 1	1 3 9	80	
1	7 459	11 8	63	
16 0	33 039	6 6 8	8 67	3 00

ex 1 d 1f K 1 B g 1 1 adp t 1 1 dl

Statements Nos. IX *and* X —

AREA IN

Serial Nos	Crops	Classification	Pargannah Karnal — *Nardak* Single	*Nardak* Double	*Nardak* Total	*Khadir* Single	*Khadir* Double	*Khadir* Total	*Bangar* Single	*Bangar* Double	*Bangar* Total
1	Cotton	Selected crops	1,329	177	1,506	681	1,341	2,022	2,222	542	2,764
2	Sugarcane					361		361	196		196
3	Indigo										
4	Maize		218	348	566	123	1,686	1,809	55	391	446
5	Fine Rice		475	65	540	38	378	416	405	2,927	3,332
6	Coarse Rice		4,935	3,165	8,100	133	539	672	1,834	2,370	4,204
7	Jawar		8,773	171	8,944	3,141	600	3,741	4,941	152	5,093
8	Bajra		1,008	62	1,070	266	13	279	326	55	381
9	Moth					559	31	590	426	11	437
10	Sugarcane, fallow										
11	Wheat		1,705	366	2,071	10,069	1,653	11,722	5,905	2,499	8,404
12	Gram		11,839	3,068	14,907	4,226	1,640	5,866	4,368	1,815	6,183
13	Barley					831	558	1,389	862	1,458	2,320
14	Wheat & Gram,					256	55	311	409	231	640
15	Barley & Gram,		424	105	529	221	70	291	369	339	703
16	Masur					518	196	714			
3	Indigo	Miscellaneous crops				43	7	50	110	50	160
4	Maize										
9	Moth		211	2	213						
10	Sugarcane, fallow					147		147	62		62
13	Barley		182	173	355						
14	Wheat & Gram,		314	111	425						
15	Barley & Gram,										
16	Masúr		5	12	17				92	218	310
17	Urad or Mash		370	1	371	110	33	143	81	11	92
18	San and Sani		74	1	75	95	16	111	15	11	26
19	Mandwa		62	21	83	48	41	89	18	7	25
20	Tobacco		25	76	101	40	135	175	34	88	122
21	Chillies & Vegetables		21	16	37	71	98	169	73	54	127
22	Wheat & Barley		31	14	45	93	50	143	53	98	151
23	Wheat, Barley and Gram		6	2	8	33	3	36	18	6	24
24	Rape (Sarsam),		318	79	397	68	3	71	124	28	152
25	Miscellaneous,		364	40	404	173	78	251	153	38	191
26	Gawánr	Fodder crops	52		52	273	29	302	97	7	104
27	Chíb		1,607	22	1,629	601	231	832	1,386	110	1,496
28	Methi		1	4	5	102	500	602	10	100	110
	Total autumn crops		19,320	4,052	23,372	6,629	5,007	11,636	12,216	6,958	19,174
	Total spring crops		15,029	4,052	19,081	16,721	5,007	21,728	12,431	6,958	19,389
	Total area under crops		34,349	4,052	38,401	23,350	5,007	28,357	24,647	6,958	31,605
	Percentages		89.5	10.5	100.0	82.4	17.6	100.0	78.0	22.0	100.0

* Including double-cropped

NOTE.—These figures are those of the preliminary

Showing **General Crop Areas** *in acres*

ACRES						PERCENTAGES				
PARGANAH PANIPAT						PARGANAH KARNAL			PARGANAH PANIPAT	
Khadir			*Bangar*							
Single	Double	Total	Single	Double	Total	Nardak	Khadir	Bangar	Khadir	Bangar
1 64[illegible]	3 400	5 0[illegible]1	5 [illegible]04	4[illegible]6	7 [illegible]	3·9	1	8 7	8 3	8 3
2,10[illegible]		2,10[illegible]	4,861		4,861		1 3	1 6	3 5	4·9
313	[illegible]8	[illegible]71	1 0[illegible]	3[illegible]	1 161				1 1	1[illegible]
[illegible]	[illegible]	2,8[illegible]				1[illegible]	6 4	1 4	4 8	
3[illegible]	1,[illegible]4	1,[illegible]	3 171	6 [illegible]3	9 [illegible]	1 4	1 5	10 6	2 6	9 8
						[illegible]1 1	[illegible]4	13 3		
11 15[illegible]	2 001	13 153	24 114	4 400	28 [illegible]	[illegible]3 3	13[illegible]	16 1	[illegible]7	28 8
8 [illegible]0	34	[illegible]04	1 [illegible]	[illegible]	[illegible]	[illegible]8	1·0	1 2	1[illegible]	[illegible]6
1 048	41	1 0[illegible]	[illegible]0	53	1 04[illegible]		[illegible]1	1 3	1 8	1 1
			1 4[illegible]		1 4[illegible]					1 5
20 538	[illegible]903	23 441	17 [illegible]0	1 [illegible]	19 [illegible]	5 4	41 3	[illegible]6·6	38 7	19·9
6,[illegible]3	3 605	9 841	9,311	5 94[illegible]	15 [illegible]	38 8	[illegible]0 7	1[illegible]	16 3	1 4
			1 1 9	1 668	[illegible],84[illegible]		4·9	[illegible]4		[illegible]9
2,3[illegible]	3[illegible]3	715	8 0[illegible]3	31	10 [illegible]		1 1	·0	4[illegible]	10[illegible]
			811	1 61[illegible]	[illegible]	1 4	1·0	2[illegible]		4
							[illegible]8			
								[illegible]		
			[illegible]4	2[illegible]	[illegible]					·2
						·6				
60		[illegible]60					5	[illegible]	4	
3[illegible]	52[illegible]	89				·9			1 5	
						1 1				
[illegible]6	9	135							[illegible]	
94	243	337	140	4 1	561			1·0	·6	5
10[illegible]	16	1[illegible]3	544	1[illegible]6	680	1	5	3		7
118	48	166		16	6[illegible]	2	[illegible]	1	3	1
84	98	18[illegible]	35	31	6	[illegible]	3	1	3	1
61	15[illegible]	[illegible]16	41	1 4	16[illegible]	3	6	4	4	[illegible]
203	1[illegible]0	333	90	3[illegible]	1 [illegible]	1	6	4	·6	1
11	6	11[illegible]	161	1	3[illegible]	1	5	[illegible]	·2	3
3[illegible]	17	5	5[illegible]	98	1[illegible]		1	1	1	[illegible]
5	[illegible]	7	[illegible]14	11	3[illegible]	1 0	2	[illegible]		3
10	161	[illegible]66	11	145	60	1 1	9	·6	4	3
1 0[illegible]	16	18 1	1 [illegible] 1	103	1 911	1	1 1	3	3 1	1 9
35	13	48	[illegible]56	4[illegible]	33[illegible]	4[illegible]	2 9	4 7	1	3
61	084	14[illegible]	8[illegible]	809	8[illegible]		1	3	3 5	·9
20 103	10 1[illegible]4	30 [illegible]7	15 [illegible]01	15,33[illegible]	[illegible]1 23[illegible]	60 8	[illegible]1 1	60 7	50·0	61 7
30 [illegible]	10 1[illegible]4	40 3[illegible]6	37 9[illegible]3	15,33[illegible]	[illegible]3 [illegible]	49 7	[illegible]6 5	61 3	66 7	53 7
50,355	*10 1[illegible]*	*60 470*	*83 8 [illegible]*	1[illegible] 33[illegible]	[illegible]9 16	110 5	117 6	12[illegible] 0	116 7	115 4*
83 3	16 [illegible]	100 0	84 6	1[illegible] 4	100[illegible]					

land counted twice over

areas and do not agree exactly with the final figures

Statement No. XI.—*Showing* Detailed Areas *for* Selected Crops *in acres.*

Kind of soil			Karnal Nardak											
			Cotton	Maize	Fine Rice	Coarse Rice	Jawar	Bajra	Wheat	Gram	Barley and Gram	Miscellaneous	Fodder crops	Total crop area
Goira	Dákar Rausli Bhur	Wet	Classed as manured											
	Dákar Rausli Bhur	Dry												
Manured	Dákar Rausli Bhúr	Wet	5 217	11 253	8 3	25 20	1 112	16	17 216	4 52		5 156	2 33	75 1,135
	Dákar Rausli Bhúr	Dry	1 133	1 14	1	39 109	286	16	6 53	14 131	2	2 103	65	64 972
Unmanured	Dakar Rausli Bhur	Wet	10 317	5 75	120 12	112 36	8 110	3 77	60 962	111 706	4 13	15 296	4 180	182 3,114
	Dakar Rausli Bhur	Moist												
	Dakar Rausli Bhur	Dry	14 809	9 168	259 107	4 648 3,081	167 7,900	7 921	104 257	1,612 9,209	91 314	135 1,313	34 1,364	7,080 25,443
Total			1,506	566	540	8,100	8,944	1,070	1,705	11,839	424	2,025	1,682	38,401

NOTE.—These figures are those of the preliminary areas, and do not agree exactly with the final figures.

Statement No XI —*Showing* Detailed Areas *for* Selected Crops *in acres* —(contd)

Kind of soil			Cotton	Sugarcane	Maize	Fine Rice	Coarse Rice	Jawár	Bájra	Moth	Wheat	Gram	Barley	Wheat and Gram	Barley and Gram	Mattar	Miscellaneous	Fodder crops	Total crop area
			KARNAL KHADIR																
Goira	Dakar	Wet	5	9	9	1	4	7			4?	9	4	2		3	3		141
	Raush		119	0	1?9	3	10	6?	2		314	[illegible]	[illegible]			5	47	18	864
	Bhur							1									1	1	3
	Dakar	Dry			1		5				[illegible]	[illegible]	[illegible]	1		[illegible]		1	?1
	Raush		3		6	1		7			70	8	15		2	14	7	10	149
	Bhur							8		3							1	8	0
Manured	Dakar	Wet	18	18	70	54	38	4		1	76	6	5			3	10	6	[illegible]
	Raush		1 00?	? 8	1 09	19	6	156	1	3	1 1?8	103	46	1	5	5	6?	66	4 5 ?
	Bhur		19		18					2	[illegible]	3	1	1		1	[illegible]	[illegible]	61
	Dakar	Dry	3	1	7		9	5			8	1	1				3		?8
	Raush		?6	8	59		7	15	1		?6	11	1	[illegible]		1	17	4	?38
	Bhur		[illegible]	1	6								1					1	1
Unmanured	Dakar	Wet	14	1	4	?7	54	?4			?77	95	38	16	18	14	5?	4	1 4?8
	Raush		519	?0		[illegible]	85	1 ?7	41	00	5 ? 0	1 75	65	1 6	6	69	403	64	11 3?4
	Bhur		4	1	1		2	1	57	96	500	158	10	17	4	4	5	108	1 1 9
	Dakar	Moist		1			4	17			136	56	7	3	6	63	1	?4	36?
	Raush				5?			37	1	1	?06	56	1 ?5	6	9	80	31	50	1 3?3
	Bhur				6				7	1	180	1?	6	1		[illegible]	6	19	91
	Dakar	Dry			5	7	140	5			71	?21	11	5	8	[illegible]	6	7	560
	Raush		94		41	[illegible]	10	1 81	67	144	984	1 34	191	8	9?	41	16?	188	4 570
	Bhur		3		[illegible]			101	10?	133	15	169	30	24	1?	8	2?	1 6	91
Total			0	61	1 809	416	672	3 741	79	590	10 069	4 6	831	56	91	548	1 0?3	1 37	8 357

NOTE —These figures are those of the preliminary areas and do not agree exactly with the final figures

Statement No. XI —*Showing* Detailed Areas *for* Selected Crops *in acres*—(contd)

Kind of soil			Cotton	Sugarcane	Maize	Fine Rice	Coarse Rice	Jowar	Bajra	Moth	Wheat	Gram	Barley	Wheat and Gram	Barley and Gram	Miscellaneous	Fodder crops	Total crop area
			Karnal Bangar															
Gorra	Wet	Dakar	3			25	11	1			[illegible]		1			1	3	108
		Raush	143	21	116	[illegible]	16	[illegible]	3	4	227	21	[illegible]			89	[illegible]	945
		Bhur																
	Dry	Dakar				2	1											3
		Raush	1	1	1			16	1	[illegible]	2	9	[illegible]			[illegible]	4	60
		Bhur																
Manured	Wet	Dakar	11	11	7	[illegible]	192	16			67	[illegible]	[illegible]	[illegible]		[illegible]	1	[illegible]
		Raush	1,071	[illegible]	[illegible]	[illegible]	180	215	5	7	[illegible]	[illegible]	141	27	[illegible]	[illegible]	[illegible]	[illegible]
		Bhur				[illegible]												[illegible]
	Dry	Dakar			1	[illegible]					[illegible]	1						21
		Raush	2	[illegible]	1	[illegible]		10			16	[illegible]	[illegible]			[illegible]	1	[illegible]
		Bhur						1										1
Unmanured	Wet	Dakar	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	71	61	[illegible]	[illegible]
		Raush	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2,077	111	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		Bhur	1				1	7	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		1	[illegible]	[illegible]
	Moist	Dakar																
		Raush																
		Bhur																
	Dry	Dakar	[illegible]			[illegible]	101	[illegible]	[illegible]		[illegible]	171	[illegible]	71	[illegible]	[illegible]	7	[illegible]
		Raush	[illegible]	[illegible]	17	17	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		Bhur	[illegible]		1		1	21	[illegible]	[illegible]	[illegible]	[illegible]	1		[illegible]	[illegible]	[illegible]	[illegible]
Total			2761	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1610	[illegible]

Note —These figures are those of the preliminary [illegible] and do not [illegible] exactly with [illegible] final figures.

Statement No XI —*Showing* Detailed Areas *for* Selected Crops *in acres*—(contd)

Kind of soil			Panipat Khadir													
			Cotton	Sugarcane	Indigo	Maize	Rice	Jawár	Bájra	Moth	Wheat	Gram	Wheat and Gram	Miscellaneous	Fodder crops	Total crop area
Goira	Dákar	Wet	3	4		10	38	17			47	9	1	15		144
	Rausli		411	188	3	35	4	3 3	5	6	819	51	13	149	37	[illegible]
	Bhúr		2					5	1	1	13	1	9		1	33
	Dákar	Dry					1				3	2				17
	Rausli		16	7		5	7	85		9	7	8	1		7	2 0
	Bhur										8					8
Manured	Dákar	Wet	61	55	1	46	14	43			3	31		20	4	646
	Rausli		4 8	1 533	1 1	1 886	144	1 87	1		5 45	5	141	656	18	14 957
	Bhur		57	7			1	1	1	6	35		6	4	9	138
	Dákar	Dry	11	8			31	8			8	10	1	5		10
	Rausli		61	9		100	1	175	1	7	64	9	1	3	10	1 1 3
	Bhur							8					1			9
Unmanured	Dákar	Wet	0		1	13	537	311		5	534	443	79	71	3	045
	Rausli		577	6	5 5	[illegible]	31	6 18	14	415	9 474	2 788	1 066	6 0	815	231 8
	Bhur		14	1	13	3		4	85	150	516	158	09	21	254	1 648
	Dákar	Moist														
	Rausli															
	Bhur															
	Dákar	Dry	10			3	3 0	47				428	69	37	4	1 340
	Rausli		14	8	6	5	45	3 915	05	65	2 691	1 804	5	237	329	10 481
	Bhur		8		1			311	446	00	335	19	60	18	200	2 088
Total			051	2 107	671	894	1 58	13 153	904	1 089	20 538	6 253	9	1 885	1 960	60 479

Note —These figures are those of the preliminary areas and do not agree exactly with the final figures

Statement No XI —*Showing* Detailed Areas *for* Selected Crops *in acres*—(concld)

Kind of soil			Cotton	Sugarcane	Indigo	Rice	Jawar	Bajra	Moth	Sugarcane fallow	Wheat	Gram	Barley	Wheat and Gram	Miscellaneous	Fodder crops	Total crop area
			PANIPAT BANGAR														
Gohra	Dakar	Wet	10	21	1	179	37			1	11	21	21		1[illegible]		[illegible]
	Raush		526	116	51	119	27	27	1	10	[illegible]	69	17	101	140	51	[illegible]
	Bhur														1		10
	Dakar	Dry					6										10
	Raush		20	3		1	15	27	[illegible]		6	[illegible]	1	6	5	[illegible]	[illegible]
	Bhur																11
Mansurid	Dakar	Wet	[illegible]	120	12	[illegible]	[illegible]			11	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Raush		2,651	[illegible]	111	1,055	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	76	[illegible]	46	[illegible]	[illegible]
	Bhur		[illegible]	6				1	[illegible]		19			2		[illegible]	[illegible]
	Dakar	Dry															
	Raush		53	[illegible]		[illegible]	12	12	2		[illegible]	[illegible]		12		1	[illegible]
	Bhur						1										1
Unsanchiid	Dakar	Wet	[illegible]	7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		1[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Raush		[illegible]	21	911	[illegible]	12[illegible]	[illegible]	[illegible]	2	11[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Bhur		18		16		[illegible]	[illegible]	[illegible]		[illegible]	31	[illegible]	1	[illegible]	[illegible]	[illegible]
	Dakar	Moist															
	Raush																
	Bhur																
	Dakar	Dry	2			172	[illegible]	[illegible]			[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
	Raush		577		6	[illegible]	12[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Bhur		7				[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
Total			[illegible]	1,861	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NOTE —The figures are [illegible]

Statement No XII —*Showing*

Kind of soil			Nardak: Wheat	Nardak: Gram	Nardak: Wheat and Gram	Nardak: Barley and Gram	Nardak: Miscellaneous	Nardak: Fodder crops	Nardak: Total area	Kharif Khadir: Wheat	Kharif Khadir: Gram	Kharif Khadir: Barley	Kharif Khadir: Masur	Kharif Khadir: Miscellaneous	Kharif Khadir: Fodder crops	Kharif Khadir: Total area
Goira	Dákar	Wet	Classed as manured							18	15	12	1	[illegible]	1	62
	Rausli									167	[illegible]	61	1	[illegible]	31	[illegible]
	Bhur															-
	Dákar	Dry									1			1		4
	Rausli									3	1	1		-		7
	Bhur															
Manured	Dakar	Wet	13	9			13		35	50	[illegible]	30	2	20	11	153
	Rausli		167	29	1		152		349	911	431	210	70	276	[illegible]	2 2[illegible]3
	Bhur									17	10	4		1	1	33
	Dakar	Dry	4	16			2		22	2	14			4		20
	Rausli		28	17	1		26		102	30	19	14	6	14	2	115
	Bhur									7	2					9
Unmanured	Dakar	Wet	3	108	1	3	20	-	110	37	231	50	3	19	5	557
	Rausli		63	60			85	2	[illegible]	231	618	160	73	56	87	1 063
	Bhur									5	21	1	7	11	1	19
	Dákar	Moist								29	9	2	1	2		43
	Rausli									70	5	1	12			88
	Bhur									0						6
	Dakar	Dry	62	1 516	52	63	21		1 717	15	107	3		2		127
	Rausli		26	1 274	53	39	70		1 16[illegible]	36	1[illegible]3	33	16	8	2	241
	Bhur									2	19	3	1	1		29

PRECEDING

	Nardak: Wheat	Nardak: Gram	Nardak: Wheat and Gram	Nardak: Barley and Gram	Nardak: Miscellaneous	Nardak: Fodder crops	Nardak: Total area	Kharif Khadir: Wheat	Kharif Khadir: Gram	Kharif Khadir: Barley	Kharif Khadir: Masur	Kharif Khadir: Miscellaneous	Kharif Khadir: Fodder crops	Kharif Khadir: Total area
Maize	172	76			101		315	999	159	221	15	175	80	1 6[illegible]8
Jawar	26	96		1	18		171	131	318	47	17	31	20	560
Rice	121	2,785	111	101	109		3 230	331	391	115	6	11		917
Cotton	22	12			109	1	177	96	427	91	61	16	337	1 311
Other crops	25	70			31		126	93	21[illegible]	71	61	10	3	163
Total area	366	3 068	111	105	395	1	4 0[illegible]2	1 0[illegible]3	1 610	[illegible]5	1[illegible]6	[illegible]	500	5 0[illegible]7

NOTE —These figures are those of the preliminary

Statement No XIII —*Showing* General

	Irrigated: Nardak	Irrigated: Bangar: Karnal	Irrigated: Bangar: Panipat	Irrigated: Khadir: Karnal	Irrigated: Khadir: Panipat
Cotton	186	230	250	2[illegible]0	352
Sugarcane		625	813	7[illegible]2	887
Maize	392	192		510	613
Fine rice	312	571	571	436	181
Coarse rice	320	324		3[illegible]8	
Jawar	159	181	186	157	177
Bájra	160	162	163	123	135
Moth		98	96	78	81
Wheat	414	196	598	363	459
Gram	433	516	608	30[illegible]	140
Barley		475	483	351	
Wheat and Gram		121	405	358	443
Barley and Gram	341	366		385	
Masur				104	

Double Crop Areas *in acres*

Karn Ban r								Pan t Kha i					P ni a Ban ar							
Wheat	G am	Ba l y	Wheat d Gram	B l y and G m	Miscellaneous	Fodd r	T tal as	W1 eat	G m	Misc lla eous	Fodde	T tal	W heat	G am	Barl y	Wl eat and G m	Ba l y a d G m	Mi cellaneous	F dd	T tal
8 1_0	9 19	21 6	2 1	8 1	4 69	3 4	55 5	18 318	18 0 1	6 16_ 1	3 _3	45 0_ 2	41 108	2 6	145	3_ 16	14 11	24 60 1	9 _3	145 435 3
1	1	1 1						0	11 13	9	7	11 40		14				2		2 21 2
6__ 1 49	11 __1	214 __6	60 40	47 23	17 121 1	4 5	1 11 1 968 3	44 1 9 3	8 1 134 17	3 4	3 1 601 1	6 3 31	1 0 664	48 440	161 493 1	13 401	143 183	23 10 10	61 3 6	1 48 606 11
		1		1			3 1	5 48	3? 1 4	6 56	4 1	43 300 1		4				1		7
_0' 0	6_0 16	591 2 4	24 5	164 61	3 2_3	8 9	1 6 1 6_0	39 40	431 1 030 _9	5 24 15	4 133 1	5_5 1 811 46	5 741	1 544 109 10	4_3 41	3 1 00	7 0 464	111 440	115 231	3 6 2 5,600 1
__	4_ 6_ 8	11 10	4	11 3	3 5		4 10 5	_61 4	_39 3_3	6 112 10	19	_3 ?0	1 5	149 031 13	5 8	30 330 3	1 0 1	4 69 11		189 1 380 30
CROP																				
_08 43 109 81 60	56 190 1 2_0 17 96	6_ 93 1 _0_ 44 54	3 14 20 5 7	2 1 308 8 6	60 8 158 1 51	3 3_ 58 2	3 1 4_ 5 ? 51 2 6	1 7 403 166 1 40	3 6 1 0 7 90 1 0 6	8 4_9 1 4 36 159	117 0 1 84 8	2 6 8 2 001 1 1 3 109 684	1_0 418 8 7 ?0 5	5_ 1 93_ 2 47 915 005	1 341 8 0 31 161	__ 1 03 606 1 161	?8 1 18 6 2	413 2 2 _03 91	4 6 19 4 4 10	2 6 4 460 6 553 4 6 1 6 0
2 499	1 815	1 4	231	339	510	100	6 9_	2 003	3 0?9	1,520	2 034	10 1 4	1 09_	5 915	1 609	31	1 015	001	500	15 335

areas d d not g ee actly with tl final fig

Produce Estimates *in sers per acre*

U					M s	T				
	Bá g		*Khád*				*Bá g*		*Khád*	
A dak	K ál	Pá íp t	Ka ál	P nípat	Karnál Kiui dir	A d k	Karnál	Pánípat	K rnál	Pánip t
89	1_5	161	134	215	144	1 3	2 4	270	8	340
	317	450	354	4 0	_		606	843	689	828
156	181		_08	09	127	209	4 8		46	6 5
1 8	300	390	01	317		231	5 _	571	41	4_9
142	38		2_9		2 6	147	3 3		3 3	
113	1__	144	112	107	1 7	116	15	166	133	152
113	129	130	114	11	109	119	140	141	117	118
	80	73	56	56	64		84	84	67	0
218	290	323	9	99	192	306	490	593	?82	454
2 5	374	417	318	37	3 0	240	4 6	563	330	413
	3)	3 1	15		189		454	4 9	283	
	356	380	_50	296	227		401	476	347	407
204	301		261		214	210	317		3 5	
			91		63				5	

Statement No. XIV.—*Showing* Detailed Produce Estimates *in sers per acre*

Staple	Circle	Kind of Soil																	
		Gora						*Manured*						*Unmanured*					
		Wet			Dry			Wet			Dry			Wet			Dry		
		Dakar	Rausli	Bhur	Dakar	Rausli	Bhur	Dakar	Rausli	Bhur	Dakar	Rausli	Bhur	Dakar	Rausli	Bhur	Dakar	Rausli	Bhur
Cotton	Nardak							288	264		192	180		144	132		90	72	
	Karnal Bangar	108	108			288		312	300			216		168	156	54	156	120	42
	Panipat do	180	180			336		384	384	180		312		192	192	60	168	144	48
	Karnal Khadir	108	108			288		312	300	180	288	240	144	156	78	54		60	42
	Panipat do	180	180	192		336		384	384	180	336	288		192	96	60	168	72	48
Gur	Karnal Bangar		800			150		700	700			550		375	375			250	
	Panipat do	800	950			500		700	850	100		400		100	450				
	Karnal Khadir	850	850			150		750	750		550	550	200	350	275	150			
	Panipat do	1,000	1,000			500		900	900	100	600	400		100	300	200		300	
Maize	Nardak							408	432		264	240		252	264		144	132	
	Karnal Bangar		672			312		480	528		252	264		312	312			168	108
	Do Khadir	600	672		312	312		480	528	456	252	264	240	312	300	192	168	126	108
	Panipat do	624	768			336		480	624			288		360	300	192	192	168	
Fine Rice	Nardak							552	528		480			360	312		180	168	
	Karnal Bangar	816	792		528			672	624	528	528	504		360	360		288	264	
	Panipat do	864	768		624	528		768	672		672	576		525	432		384	336	
	Karnal Khadir	672	624			480		528	408					[illegible]	360		[illegible]	252	
	Panipat do	672	624		480	408		576	480	444	432	384		432	384		[illegible]	288	
Coarse Rice	Nardak							456	408		300	252		300	252		144	132	
	Karnal Bangar	651	588		420			540	492					300	288	138	240	216	108
	Do Khadir	540	504		384			432	624		624	288		324	276	168	252	216	

JAWAR		300 31 300 31_	3 4 360 3 4 300	288 264 288	288	31 336 31 336	240	64 40 6 6 6		40 40	40 40	8 40 76 40 76	04 04 04	160 1 6 144 144 144	13 144 168 144 144	96 96 84 84	144 144 1 0 13 1 0	108 144 144 108 96	96 84 96 72
BAJRA			288 288 88 288	88 88		5		10		50 50		16 8 8 8		144 156 1 6	144 156 156 13_ 13	108 108 108 108	1 0 13 13	108 13 13 120 1 0	108 108 108 108
MOTH			1 13_ 13 13	13		13 13 13_ 13	13	1		120 120 120		120 1 0		96 96 96 96	96 96 84 84	60 60 60 60		84 84 60 60	48 48 48 48
WHEAT		768 864 7 0 816	68 864 7 0 816	480	408 480	43_ 480 360 43_		[illegible] 4		480 408 480	336 384 360 43	31 360 384 336 384		384 31_ 384 408 480	384 480 5 6 31_ 384	88 88 19 1_	8 88 360 31_ 336	1_ 64 336 64 88	1_ 19 13 144
GRAM		960 840 91	816 864 744 816	648	864 744 816	7 0 68 660 7 0		[illegible] 56 74 51		576	648 7 0 648 79	5 6 7 7 0 600 648		480 4 [illegible] 600 648	408 504 576 336 384	288 88 1 40	31_ 55 4 564 00	04 354 43 288 336	40 240 156 168
BARLEY		720 768 800	864 960 768		456	43 480 408		54		384	360	384 312	288	64 384 360	360 43 74	88 336 19	31 384 88	288 336 40	40 120
WHEAT & GRAM		91 816 864	864 816	480 480	408	480 408 480		96 76 57		408 43	8	43 384 480	336	31 384 432 04	408 480 384 456	16 88 16 40	384 43 384 480	31 584 88 336	40 144 156
BARLEY AND GRAM			768			408			660 480		600	480		360 16 408	336 384 360	204	40 336 360	1_ 88 64	04 144
MASUR	Karnál Khádir	204	16		19	19		19	04	144		144		96	84	60	84	60	48

Statement No. XVA.—*Showing* Ruling Prices *in the* Panipat Tahsil *in sers per rupee*

Year	Cotton	Gur	Maize	Fine Rice	Jawar	Wheat	Barley	Gram
1830						15		62
1831	15	23	75		64	56		82
1832	16	24	55	42	59	42	50	56
1833	14	17				29	37	25
1834	20	22	70	65	80	51		62
1835	18	15	67	60	69	44		65
1836	17	20	60			38		59
1837	14	15	26			25		35
1838	16	18	35	28	33	26		35
1839	16	20	25	30	25	24	45	27
1840	17	20	25	20	24	23	35	52
1841	20	18	18	33	45	35	41	55
1842	18	19	35	47	36	45	43	45
1843	20	27	57	36	50	41	62	47
1844	17	22	40	38	36	52	42	42
1845	20	22	46	38	40	25	55	44
1846	23	14	40	35	66	30	47	45
1847	19	17	46	42	41	35	46	42
1848	13	22	31	35	30	31	45	39
1849	14	25	50	37	50	36	47	43
1850	18	28	54	38	51	49	75	62
1851	18	22	53	36	53	52	44	42
1852	26	23	57	34	53	58	52	47
1853	23	22	36	35	37	35	49	49
1854	22	27	60	42	80	59	65	62
1855	20	26	65	44	58	46	69	54
1856	17	20	53	49	55	45	75	72
1857	18	22	76	50	56	42	66	76
1858	12	20	41	37	42	40	59	60
1859	12	18	40	34	40	27	39	30
1860	11	13	13	18	12	15	18	16
1861	16	13	29	32	29	32	44	34
1862	11	18	18	47	19	39	54	47
1863	5	17	35	37	37	31	47	40
1864	6	18	31	30	32	25	47	32
1865	9	22	35	31	35	27	41	36
1866	11	16	28	27	29	23	33	30
1867	13	14	36	32	38	26	35	30
1868	7	10	12	23	16	16	21	20
1869	6	16	21	20	23	16	23	19
1870	9	16	31	33	31	26	36	28
1871	10	15	31	30	32	24	33	25
1872	12	15	30	32	32	26	10	36
1873	12	15	30	29	32	23	37	32
1874	12	19	32	29	32	26	38	33

Statement No. XVI.—*Showing* Rates *and* Kinds *of* Rent *in acres and rupees.*

1	2	3	4.	5.	6	7	8	9	10	11	12	13	14	15
			Kinds of Rent					Cash Rents compared with Revenue			Analysis of fixed Rents			
Assessment Circle	Kind of village		Fixed rates, cash	Paying the same as owners	Crop rates	Share of produce	Fixed grain rates	Paying the same as or less than owners	Paying more than owners	Paying double the revenue or more	Total figures	Average rate of fixed cash rents per acre	Average of fixed grain rents per acre	Average rate of fixed cash and grain rents per acre
Nardak	Rent villages	Holdings	158	23	74	167		101	80	45	158	1 10 3		1 10 3
		Acres	1,238	57	141	668		645	650	207	1,238			
	Other villages	Holdings	442	1,202	11	55		1,526	118	50	442	1 6 6		1 6 6
		Acres	1,792	4,826	12	241		6,135	483	77	1,792			
	Total	Holdings	600	1,225	85	222		1,627	198	95	600	1 8 0		1 8 0
		Acres	3,030	4,883	153	909		6,780	1,133	331	3,030			
Karnal Khadir	Rent villages	Holdings	893	40	47	257		256	677	38	893	3 3 10	.	3 3 10
		Acres	2,540	195	66	517		1,184	1,551	216	2,540			
	Other villages	Holdings	1,007	660	9	142	16	1,077	590	164	1,023	2 13 6	3 2 3	2 13 7
		Acres	5,663	2 597	17	771	21	5,170	2,790	821	5,684			
	Total	Holdings	1,900	700	56	399	16	1,333	1,267	202	1,916	2 15 4	3 2 3	2 15 4
		Acres	8,203	2,792	83	1,318	21	6,751	4,241	1,037	8,224			

Karnal Bangar	Rent villages	Holdings	11		83	3 1		1	10	5	11	4 0 10		4 0 10
		Acres	1 1		37	1 33			113	20	1 1			
	City of Karnál	Holdings	55	89			[illegible]	104	40	[illegible]	57	5 0 0	3 1 8	4 14 0
		Acres	40	5 5			5	6	305	145	430			
	Other villages	Holdings	580	1 37		2		1 870	97	11	589	1 1 10		1 12 10
		Acres	1 938	4 93		10		6 668	20	46	1 958			
	Total	Holdings	655	1 4	83	3 3	[illegible]	1 97	147	4	657	6 11	3 1 8	2 6 11
		Acres	461	5 507	937	1,43	[illegible]	34	6 6	211	2 489			
Panipat Khadir	Rent villages	Holdings	111	49	73	19	36	104	43	1	147	3 5 0	5 8 0	4 1 0
		Acres	961	59	08	6	500	195	539	50	1 461			
	City of Pánipat	Holdings	45			64	56				501	4 ? 0	5 4 0	4 14 0
		Acres	55			804	3 379				3 881			
	Other villages	Holdings	1 597	4 419	36	37	10	5 756	6	[illegible]	1 607	10 0	6 5 0	11 0
		Acres	5 193	11 96	115	145	68	15 805	671		5 61			
	Total	Holdings	1 7 3	4 468	109	180	30	5 860	05	4	05	2 15	5 4 10	3 10 10
		Acres	6 706	11 345	[illegible]	1 574	3 897	16 003	1 80	10	10 60			
Panipat Bangar	Rent villages	Holdings	1		1 810	755		135	136	39	755	3 [illegible] 0		3 7 0
		Acres	1 6		2 608	4 808		310	6	87	4 808			
	Other villages	Holdings	1 8 0	8 649		38		10 088	561	1 0	38	5 0		2 5 0
		Acres	5 635	17 061		195		1 0	1 566	310	19			
	Total	Holdings	101	8 649	1 810	793		10 ? 3	697	160	93	2 7 0		2 7 0
		Acres	6 169	17 061	668	5 003		1 540	1 70	406	5 003			

Statement No. XVII.—*Showing* Rent *and*

Pargana	Assessment Circle	Kind of Soil	Area in acres	*Produce Estimates*: Rent share of produce	*Produce Estimates*: Rate per acre	*Rent Estimates*: Rate per acre.	*Rent Estimates*: Total rental
KARNAL	NARDAK	Manured, irrigated	1,227	6,408	5 3 7	4 0 0	4,908
		" dry	1,046	2,977	2 13 6	2 8 0	2,615
		Unmanured, irrigated	3,701	10,736	2 14 5	2 11 0	9,946
		" dry dakar	7,102	9,098	1 4 6	1 7 0	10,209
		" " rausli	25,695	21,830	0 13 8	1 1 0	27,301
		Total cultivation	38,771	51,049	1 5 2	1 6 8	54,979
		Pasture	92,998	12,147	0 2 1	0 1 5	8,038
		Total culturable	131,769	63,196	0 7 8	0 7 8	63,017
	KARNAL KHADIR	Gora, irrigated	1,024	8,133	7 15 1	7 8 0	7,680
		" dry	199	738	3 11 4	5 0 0	995
		Manured, irrigated	4,913	33,956	6 14 7	6 0 0	29,478
		" dry	297	1,591	5 5 9	4 0 0	1,188
		Unmanured, irrigated dákar	1,453	6,374	4 6 2	4 4 0	6,175
		" " rausli	11,510	31,171	2 11 4	3 8 0	40,285
		" " bhúr	1,160	1,725	1 7 10	2 2 0	2,465
		" dry dakar	560	2,606	4 10 5	2 14 0	1,610
		" " rausli	4,603	10,718	2 5 3	2 2 0	9,781
		" " bhúr	930	1,066	1 2 4	1 2 0	1,046
		" moist dakar,	368	977	2 10 6	3 0 0	1,104
		" " rausli & bhúr,	1,783	2,368	1 5 3	1 8 0	2,674
		Total cultivation	28,800	101,423	3 8 4	3 10 0	1,04,481
	KARNAL BANGAR	Gora	1,120	7,919	7 1 2	7 8 0	8,400
		Manured	5,917	42,771	7 3 8	6 12 0	39,940
		Unmanured, irrigated dákar	5,125	16,332	3 3 0	3 8 0	17,938
		" " rausli & bhúr	12,702	48,839	3 13 6	4 0 0	50,808
		" dry " "	6,957	14,330	2 0 11	2 0 0	13,914
		Total cultivation	31,821	130,194	4 1 6	4 1 11	1,31,000
	CANAL LAND OF BANGAR TAKEN AS DRY	Gora	716	3,627	5 1 1	5 4 0	3,759
		Manured	4,740	25,927	5 7 6	4 12 0	22,535
		Unmanured dákar	5,019	11,724	2 5 5	3 0 0	15,057
		" rausli and bhúr	11,858	29,245	2 7 6	2 12 0	32,610
		Total canal area	22,333	70,523	3 2 7	3 5 0	73,961

Produce Estimates *in rupees*

Pargana	Assessment Circle	Kind of Soil	Area in acres	Produce Estimates: Rent share of produce	Produce Estimates: Rate per acre	Rent Estimates: Rate per acre	Rent Estimates: Total rental
PANIPAT	PANIPAT KHADIR	[illegible]	[illegible]	7 00	9 1 0	8 8 0	[illegible]3 613
		Manured wet *dákar* & *raush*	15 618	141 800	9 1 2	7 8 0	1 17 134
		dry	1 [illegible]	8 431	6 14 0	[illegible] 0 0	6 130
		Unmanured wet *dákar*	[illegible]	10 [illegible]	5 4	5 8 0	11 [illegible]
		[illegible]	[illegible]3 [illegible]1	75 [illegible]	3 3 9	4 4 0	98 [illegible]59
		dry *dákar*	1 3[illegible]6	6 84	5 0 9	3 8 0	4 746
		raush	10 [illegible]6	6 [illegible]	8 6	[illegible] [illegible] 0	[illegible]5 0[illegible]
		Wet *bhur*	1 [illegible]	3 119	1 11 10	6 0	4 [illegible]6
		Dry	103	6 1	1 3 11	1 4 0	26 9
		Total cultivation	60 09	[illegible]0 594	4 15 8	4 13 4	93 64
	PANIPAT BANGAR	Gora	3 131	[illegible]0 984	9 14 4	9 8 0	9 [illegible]44
		Manured wet	17 [illegible]1	185 0 5	10 [illegible] 9	8 8 0	1 51 903
		dry	1[illegible]1	1 180	6 14 5	6 0 0	1 0 6
		Unmanured wet	56 169	6 1 0	4 10 6	[illegible] 0 0	[illegible]80 94[illegible]
		dry dákar	907	4 71	5 3	4 8 0	4 08[illegible]
		raush	19 669	47 901	7 0	3 0 0	59 007
		bhur	1 6	1 [illegible]81	1 [illegible]	1 8 0	[illegible] 043
		Total cultivation	99 00	533 946	5 6 0	5 5	5 [illegible]50
	CANAL LAND OF BANGAR TAKEN AS DRY	Gora	[illegible]	17 5 8	6 13 7	6 12 0	1 300
		Manured	15 510	10 [illegible]80	6 10 3	6 0 0	93 0[illegible]0
		Unmanured	53 5[illegible]	1[illegible]0 516	3 [illegible] 11	3 8 0	1 87 548
		Total canal area	71 65	91 054	4 1 0	4 6	97 908

Statement No. XVIIIA.—*Showing* Revenue Rates *in rupees.*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	KARNAL NARDAK (a)									KARNAL KHADIR (b				
		Kaithal Settlement		*Mandal Settlement*			*Estimates*				Settlement	*Estimates*		
Soils	Assessment areas (acres)	1847	1856	1817	1852	1856	Produce	Rent	Final rates	Assessment areas (acres)	Mandal (1817)	Produce	Rent	Final rates
Irrigated land	4,928	1 14 3	1 6 0	2 8 0	2 0 0	2 0 0	1 11 10	1 8 2	1 14 0	20,060	2 8 0	2 0 5	2 2 1	2 2 0
Flooded land		1 4 9		1 8 0	1 1 0						1 8 0			
Dry land		1 0 0		1 0 0	0 12 0	0 13 0								
,, dakar	7,166		0 10 0				0 10 6	0 11 7	0 12 0	5,031	1 4 0	1 6 1	1 3 5	1 4 0
,, raush (c)	26,677		0 11 0				0 7 9	0 8 11	0 9 0	[5,031 bracketed with dakar]				
,, bhur (c)										2,719	0 8 0	0 10 3	0 12 1	0 10 0
Lately abandoned			0 0 6	0 2 0	0 2 0	0 0 6					0 4 0			
Pasture	92,098		0 0 6	0 2 0	0 2 0	0 0 6	0 1 0	0 0 9	0 0 8		0 1 0			

Soils.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	KARNAL BANGAR ( )					PANIPAT KHADAR.						PANIPAT BANGAR.					
	Area ( )	Rates (1842)	Estimates.		Final	Area ( )	Rates (1842)	Estimates.		Final		Area ( )	Rates (1842)	Estimates.		Final rates	
			Proposed						Proposed		Proposed	Sanctioned			Proposed		Proposed	
Irrigated land	16..	2 8 0	2 5 3	2 5 6	2 4 0	13,203	3 10 0	2 13 4	3 13 8	(d) 3 11 6	2 14 0	6,401	2 1 0	3 1 9	3 1 10	3 0 0	3 12 0
Flooded land	...	1 8 0	—	—	...	—	...	...	...	—	—	—	—	...	—	—	—
Dry land	166		1 1 2	1 1 1	1 1 0	—	—	...	—		—		...	...	—	...	...
Dakar and rausli		1 0 0	—	—		13,335	1 5 0	1 9 6	1 6 9	1 9 0	1 8 0	3,96.	1 6 0	1 5 0	1 9 3	1 7 0	1 8 0
Bhur	...	0 8 0	...		...	111	1 0 0	0 10 1	0 10	0 6 0	0 8	1 371	1 0 0	0 11 9	0 12 6	0 8 0	0 2 0
Land lately abandoned		0 4 0			...	.55	0 6 0		...	0 6 0	...	3,062	0 2 0	...	—	0 6 0	
Pasture	...	0 4 0					0 6 0	...		—	...		0 2 0	...	...	...	—
Canal land in its dry aspect (f)	12,.23	...	1 9 4	1 10 0	(g) 1 5 0		...			—		1 6..	—	2 0 6	2 1 3	3 0 0	(h) 1 13 0

( ) ... rates used ... on Mauzal villages ... in 1842, ... column ...
( )
( ) In Karnal Khâdir flooded ranna was rated as bhur.
(d) I proposed three irrigated rates Rs. 4 for dakar, Rs. ...15 for rausli and 12 annas for bhur.
( ) Two rates were used Rs. 2 12 for canal and Rs 3-6 for well land. The well area is insignificant.

(f) These rates were used ... purposes of comparison and check, ... of actual assessment which was based upon the irrigated rates.
(g) A rate of Re. 1 1) was originally proposed with an owner's ... at 4 occupier's rates. When this proportion was raised to ½ the rate was reduced to 1-5.
(h) When ... irrigated rate was reduced from Rs. 3 to Rs 2-1, this rate was ... raised as a matter of necessity.

Statement No. XVIIIB —*Showing* Assessments *and* Rates *of* Incidence *in rupees*

	Assessment in rupees						Rates of incidence per acre					
	Parganah Karnál			*Parganah Pánipat*			*Parganah Karnal*				*Parganah Pánipat*	
							Nardak		Khádir	Bángar	Khádir	Bángar
	Nardak	Khádir	Bángar	Khádir	Bángar	Total	Cultivation	Culturable	Cultivation	Cultivation	Cultivation	Cultivation
Assessment, 1842-47, with cesses	63,233	68,229	74,150	1,61,234	2,67,777	6,34,623	1 11 7	0 7 1	2 6 6	2 6 6	2 14 2	2 10 4
Assessment, 1856, with cesses	47,233	66,950	67,643			6,10,837	1 4 7	0 5 3	2 5 9	2 3 1		
Current demand, 1876, with cesses	49,160	65,875	69,269	1,69,527	2,70,015	6,23,846	1 4 3	0 5 10	2 4 7	2 2 10	2 13 2	2 11 11
New assessment, with cesses	40,876	62,937	80,960	1,80,401	2,84,285	6,49,459	1 0 10	0 4 11	2 2 11	2 8 5	3 0 0	2 14 3
Assessment of 1842-47	58,548	63,175	68,656	1,49,290	2,47,939	5,87,608	1 8 4	0 7 0	2 3 7	2 3 7	2 12 5	2 7 3
„ „ 1856	42 890	61,422	62,058			5,63,599	1 1 9	0 4 0	2 0 2			
Current demand of 1876,	42,163	57,034	59,973	1,46,777	2,33,779	5,39,726	1 1 5	0 5 0	1 15 8	1 14 2	2 6 9	2 5 8
New assessment	34,040	52,086	67,420	1,50,230	2,36,740	5,40,516	0 14 0	0 4 1	1 12 11	2 1 8	2 8 0	2 6 6
Revenue rates demand — Sanctioned	33,497	51,835	63,114	1,51,112	2,41,569	5,41,127	0 13 10	0 4 1	1 12 10	1 15 9	2 7 10	2 7 3
Revenue rates demand — Proposed				1,53,740	2,63,238	5,65,424					2 8 6	2 10 2
Produce estimate	31,598	50,712	65,097	1,51,297	2,66,973	5,65,677	0 13 1	0 3 10	1 12 2	2 0 9	2 7 10	2 11 0
Rent „	31,509	52,240	65,500	1,46,782	2,64,375	5,60,406	0 13 0	0 3 10	1 13 0	2 1 0	2 6 8	2 10 7
Percentages												
New on last assessment — With cesses,	86 5	94 0	119 7	111 9	106 2	106 3						
New on last assessment — Without „	79 4	84 8	108 6	100 7	95 5	95 9						
New on current demand — With cesses,	83 2	95 6	116 9	106 4	105 3	104 1						
New on current demand — Without „	80 7	91 3	112 4	102 4	101 4	100 2						
Assessment on revenue rates demand	101 6	100 5	106 8	99 4	98 1	99 9						

NOTE —The new assessment includes estimated owner's rates as follows —

Nardak	Rs 895
Karnal Khadir	„ 1,825
Karnal Bangar	„ 26,880
Panipat Khadir	„ 900
Panipat Bángar	„ 73,330
Total	Rs 1,03,830

Statement No XIX — Showing General Results of the Assessment in Rupees

	Mandal Tract			Other Villages		Whole Tract		
	Revenue assigned to Mandal	Revenue assigned to tillers	Revenue not assigned	Revenue assigned	Revenue not assigned	Revenue assigned	Revenue not assigned	Total Revenue
Assessed revenue	5 04_ 8 0	8 0	100	3 104 8 0	1 40 8 0	3 6 4 8 0	3 1 846-8	4 6 1
Deduct fees of zuldars and chief headmen	899 8 0	3 0 0	1	449 0 0	6,206 8 0	1,351 8 0	6,20-8	89
Deduct quit rent	10 000 0 0	1 6 0 0		071 0		13 21 7 0		13,21
Balance	46 143 0 0	68 8 0	9	9 64 1 0	3 10 0 0	9 0 9 0	3,36 6-	4 16 14
Add quit rent	1 0 0		10 000		3 001 0	1 6 0 0	13 001	13 1
Net fixed revenue	46,69 0 0	3,668 8 0	10 0	9 64 1 0	3 9 631 0	9,201 9 0	3 19 0-	4 8 9
Add estimated owner rates			11		8 3 0 0		1 0 8 0	1 03,8 0
Total income	46 69 0 0	3 6 8 0	4 01	9 4 1 0	4 3 866 0	9,01 9 0	4 3 60-	5 6

S w t g th th n t f th Mandal d rtal th e-f ce llag t be assig d t tl gr tee

Table No. XX.—*Showing the* Annual

Tahsil	Nature of item	Khalsa demand of last year of expired settlement	NEW DEMAND WITH DETAILS OF ASSESSED,						
			1286 Fasli	1287 Fasli	1290 Fasli	1291 Fasli	1292 Fasli	1293 Fasli	1294 Fasli
Panipat	13 villages under progressive assessment *	18,459 0	17,373 0	14,950 0	14,950 0	16,675 0	16,675 0	16,675 0	16,675 0
	Remaining 170 villages	3,35,795 13	2,94,915 0	2,94,915 0	2,94,915 0	2,94,915 0	2,94,915 0	2,94,915 0	2,94,915 0
	Total fixed assessment,	3,54,254 13	3,12,288 0	3,09,865 0	3,09,865 0	3,11,590 0	3,11,590 0	3,11,590 0	3,11,590 0
	Deduct for irrigation leases		331 0	331 0	328 0	329 0	282 0	271 0	271 0
	Balance or cess bearing revenue	3,54,254 13	3,11,957 0	3,09,534 0	3,09,539 0	3,11,261 0	3,11,308 0	3,11,319 0	3,11,319 0
	Deduct dues of chief headmen		2,399 0	2,416 0	2,416 0	2,427 0	2,427 8	2,427 8	2,427 8
	Deduct dues of zaildars		3,074 0	3,111 0	3,111 0	3,129 0	3,129 8	3,129 8	3,129 8
	Deduct assigned revenue and inam		29,890 9	29,894 9	29,894 0	29,894 9	29,894 9	29,894 9	29,894 9
	Net khalsa revenue	3,54,254 13	2,76,593 7	2,74,112 7	2,74,117 7	2,75,813 7	2,75,856 7	2,75,867 7	2,75,867 7
Karnal	One village under progressive assessment	3,180 0		1,800 0	1,900 0	1,800 0	2,500 0	2,500 0	2,500 0
	Remaining 152 villages	76,023 12		1,21,281 0	1,21,281 0	1,21,281 0	1,21,281 0	1,21,281 0	1,21,281 0
	Total fixed assessment,	79,203 12		1,23,081 0	1,23,081 0	1,23,081 0	1,23,781 0	1,23,781 0	1,23,781 0
	Deduct for irrigation leases			1,232 0	1,225 0	1,225 0	1,200 0	1,158 0	1,126 0
	Balance or cess bearing revenue	79,203 12		1,21,849 0	1,21,856 0	1,21,856 0	1,22,581 0	1,22,623 0	1,22,655 0
	Deduct dues of chief headmen			736 8	736 8	733 8	744 0	744 0	744 0
	Deduct dues of zaildars			1,234 8	1,234 8	1,234 8	1,243 0	1,243 0	1,243 0
	Deduct assigned revenue and inam			58,262 0	58,269 0	58,269 0	58,293 0	58,335 0	58,367 0
	Balance or khalsa revenue†	79,203 12		61,616 0	61,616 0	61,616 0	62,302 0	62,302 0	62,302 0
Total	14 villages under progressive assessment	21,639 0	17,373 0	16,750 0	16,750 0	18,175 0	19,175 0	19,175 0	19,175 0
	Remaining 322 villages,	4,11,819 9	2,94,915 0	4,16,196 0	4,16,196 0	4,16,196 0	4,16,196 0	4,16,196 0	4,16,196 0
	Total fixed assessment,	4,33,458 9	3,12,288 0	4,32,946 0	4,32,946 0	4,34,671 0	4,35,371 0	4,35,371 0	4,35,371 0
	Deduct for irrigation leases		331 0	1,563 0	1,551 0	1,551 0	1,482 0	1,429 0	1,397 0
	Balance or cess bearing revenue	4,33,458 9	3,11,957 0	4,31,383 0	4,31,395 0	4,33,120 0	4,33,889 0	4,33,942 0	4,33,974 0
	Deduct dues of chief headmen		2,399 0	3,152 8	3,152 8	3,163 8	3,171 8	3,171 8	3,171 8
	Deduct dues of zaildars		3,074 0	4,345 8	4,345 8	4,363 8	4,371 8	4,371 8	4,371 8
	Deduct assigned revenue and inam		29,890 9	88,156 9	88,163 0	88,163 9	88,187 9	88,229 9	88,261 9
	Net khalsa revenue,	4,33,458 9	2,76,593 9	3,35,728 7	3,35,733 7	3,37,429 7	3,38,158 7	3,38,169 7	3,38,169 7

*The assessment of four of these villages did not come into force till

Demand *under the* New Assessment

Ass n nd Kh r v u								F x D	
1 95 F h	1296 Fasl	1 97 F 1	1298 F 1	1299 F 1	130) F 1	1 01 F 1	1302 F 1 d aft	E t m t d w t	E t mat d fi al
16 675 0	17 8 5 0	17 825 0	17 825 0	1 8,5 0	17 8 5 0	17 8 0	1 5 0		
94 915 0 11 590 0 1 1 0	2 94 915 0 3 1 740 0 130 0	94 91 0 3 1 740 0 81 0	2 94 915 0 3 1 740 84 0	2 94 915 0 3 12 740 0 84 0	2 94 915 0 3 12 40 0 4 0	94 91 0 3 1 40 0	2 94 91 0 3 1 40 0	74 30 0	3 86 9 0 0
3 11 419 0	3 1 610 0	3 12 6 6 0	3 12 6 6 0	3 12 6 6 0	3 12 686 0	3 1 740 0	3 1 740 0	4 230 0	3 86 9 0 0
429 (	2 439 8	440 0	2 440 0	2 440 0	2 440 8	2 441 0	44 0		2 441 0
3 131 0	3 143 8	3 144 0	3 144 0	3 144 0	3 144 8	3 14 0	3 145 0		3 145 0
9 894 9	9 894 9	29 894 9	9 894 9	9 894 9	9 894 9	29 894 9	9 94 9		9 894 9
2 5 964 7	77 1 7	77 177 7	2 77 177 7	2 77 177 7	2 77 206 7	2 77 9 7	2 77 2 9 7	74 0 0	3 51 489 7
2 500 0	500 0	2 500 0	500 0	2 509 0	2 500 0	500 0	500 0		
1 21 281 0 1 781 0 1 0 3 0	1 21 81 0 1 2 81 0 9 6 0	1 1 81 0 1 3 81 0 804 0	1 21 281 (1 3 781 0 6 0 0	1 21 81 0 1 3 7 1 0 487 0	1 21 81 0 1 3 781 0 40 0	1 1 81 0 1 23 81 0 19 0	1 21 81 0 1 23 81 0	9 00 0	1 53 361 0
1 2708 0	1 2 795 0	1 2 977 0	1 23 161 0	1 3 94 0	1 23 541 0	1 23 7 2 0	1 3 81 0	29 600 0	1 53 8 0
4 0	745 0	745 0	74 8	746 0	743 8	749 8	749 8		49 8
1 243 0	1 245	1 245 0	1 246 8	1 247 0	1 249 8	1 53 8	1 2 3 8		1 ,53 8
58 418	8 4 3 0	58 6 7 0	8 765 0	68 876 0	59 118 0	9 99 0	59 307 0		59 307 0
6 302 0	6 327 0	6 360 0	6 404 0	62 425 0	62 4 0	6 460 0	62 471 0	9 600 0	9 071 0
19 1 0	0 325 0	0 25 0	0 3 5 0	0 3 5 0	0 5 0	20 5 0	0 325 0		
4 16 196 0 4 35 371 1 44 0	4 1 196 0 4 36 5 1 0 1 116 0	4 16 196 0 4 36 5 (0 8 8 0	4 16 196 4 6 1 0 714 0	4 16 196 0 4 6 1 0 67 0	4 16 196 0 4 6 621 0 94 0	4 16 196 0 4 36 5 1 0 19 0	4 16 196 0 4 3 5 1 0	1 03 830 0	5 40 351 0
4 34 127 0	4 3 405 0	4 35 633 0	4 35 817 0	4 35 950 0	4 36 227 0	4 36,,0 0	4 36 5 1 0	03 8,,0 0	5 40 51 0
3 174 0	3 1 4 8	3 185 0	3 185 8	3 186 0	3 189 0	3 190 8	3 190 8		3 19) 8
4 3 4 0	4 388 8	4 389 0	4 390 8	4 391 0	4 91 0	4 93 8	4 398 8		4 3 8 8
88 312 9	88 3 2 9	88 521 9	88 659 9	88 7 0 9	89 012 9	89 193 9	89 01 9		89 01 9
3 38 266 7	3 39 459 7	3 39 537 7	3 39 581 7	3 9 604 7	9 631 7	3 9 719 7	3 9 0 7	1 03 830 0	4 43 0 7

1287 F h t E l f P 10 000 M d l q t t.

Statement No. XXI —*Showing* Past Demands *and* Balances *in Rupees*

Year	Nardak				Khadir				Bangar				Remarks
	No of villages	Demand	Balances	Remissions	No of villages	Demand	Balances	Remissions	No of villages	Demand	Balances	Remissions	
1842-43	7	5,023			33	48,036			16	29,761			Autumn crops failed largely Spring crops good
1843-44	7	4,700			34	48,106			16	31,135			Terrible epidemic Floods stopped the canal
1844-45	7	4,700			34	48,106			16	31,135			Drought and locusts, and canal failed
1845-46	7	4,700			34	48,106			16	31,135			Crops less favourable than in 1844-45 Canal failed
1846-47	7	4,700			34	48,106			17	32,500			
1847-48	7	4,700			34	48,106			17	32,500			A year of abundance
1848-49	73	57,041	3,351		45	62,797	2,490	2,490	32	66,872			Nardak crops failed
1849-50	73	57,041	12,082		45	62,797			32	66,872			A good season
1850-51	73	57,041	14,135		45	62,797	16		32	66,872			Nardak crops a comparative failure
1851-52	73	57,051	15,141	38,674	45	61,821			32	66,827			Famine Both crops failed entirely
1852-53	73	57,051	20,791		45	61,829	187		32	66,827			
1853-54	58	39,945	8,393		43	60,617			30	50,968			Nardak autumn crops failed
1854-55	58	39,945	10,498		43	60,617			30	50,968			Very bad year Drought
1855-56	58	39,945			43	60,617			30	50,963			
1856-57	58	39,945			43	60,617	842	842	30	50,929			
1857-58	74	43,019			44	60,900	1,842	1,842	32	62,116	100		
1858-59	74	43,019			45	60,930			32	62,477	2,373	2,273	Rains very scanty
1859-60	74	43,019			45	60,930	2,516	2,516	32	62,377	1,828	1,812	Famine Both crops failed entirely
1860-61	74	43,019	9,542	9,542	44	59,224	70	70	32	60,377	1,415	1,265	
1861-62	74	43,019	13,832	12,563	44	56,471	72		32	59,555	267	161	Rains singularly abundant Splendid spring crops
1862-63	74	42,935	6,031	5,101	44	56,471	436		32	59,416	651	213	Both crops good

Karnal

PARGANAH	18(3-64	4	4 868	1 13	1 004	44	56 491			3	59 116			Very good year
	1864-65	4	4 468			46	57 841	46		3	59 116			Both crops failed entirely in Nardak
	1865-66	74	4 468			46	5 [illegible]3			3	59 134			
	1866-6	74	4 4 9	4 5 1	4 5 1	46	57 63	6 1	6 1	3	59 134			Rains failed entirely and spring crops very bad
	1867 68	74	4 663			46	57 9 1	18		3	59 548			Fine autumn crops Spring crops poor
	1868 69	4	4 663	3 795	3 795	46	57 504	4	60	3	59 546			} Famine Both crops failed entirely
	1869 0	74	4 546	19 400	7 19[illegible]	46	57 4	1 49	1 49	3	59 3			
	18 0-71	74	4 546	113	6	46	57 63	41	41	3	59 508			Autumn crops good Nardak spring crops failed
	1871	74	4 341			46	57 6	190	1 0	3	59 508			Autumn crops poor Nardak spring crops failed
	187 3	4	4 346			46	57 4	50		3	59 810			Unusually good year...
	1873- 4	4	4 346			46	7 [illegible]3	133		3	60 101			Do do
	1874-	74	4 346			46	(1	150		3	60 101			Do do
	1875- (	74	4 46			46	57 048	0	50	3	60 101	96	596	Do do
PARGANAH PANIPAT	1817 18					44	0 9 1	11 650	} 11 856	{ 45	1 6 118	8 135	} 85 755	Drought
	1818 19					46	1 0 07	1 61		46	1 5[illegible] 0	7 906		
	1819 0					60	1 36 4 6	10 785		64	1 61 611	10 817		
	18 0 1					59	1 33 67	9 84		64	1 5 1	0 074		
	18 1					68	1 41 87	17 139	15 06	78	2 06 53	13 89	19 906	
	18					68	1 48 7	8 453	7 78	79	18 3	5 751	5 701	Excessive rain injured the crops and people abandoned their villages
	18 4					54	1 13 49	7 4 0	16 1	78	0 05	14 054	5 311	Drought
	18 4- 5					53	1 1 714	380	7 380		1 90 0	6 633	6 633	} Famine Cattle died and agriculture at a standstill No great mortality
	18 6					5	1 06 006	14 88	14 88	1	1 3 7	37 356	7 367	
	18 7					3	1 29 69	46	46	7	1 88 103			Good year
	18 8					71	1 0 344	1 65	1 6	8	1 930			
	18 8 9					70	1 8 31	861	861	8	1 090	1 607	1 607	
	18 9 0					68	1 46 3	3 069	3 069	8	13 219	1 100	1	
	1830 1					7	1 6 84	481	481	8	2 18 605			
	1831 3					8	1 36 069	583	18	83	2 3 54	583		

Statement No. XXI.—*Showing* Past Demands *and* Balances *in Rupees*—(Concld.)

PANIPAT—(*Concluded*)

Year	Nardak: No of villages	Nardak: Demand	Nardak: Balances	Nardak: Remissions	Khadir: No of villages	Khadir: Demand	Khadir: Balances	Khadir: Remissions	Bangar: No of villages	Bangar: Demand	Bangar: Balances	Bangar: Remissions	Remarks
1832-33					77	1,36,033	1,724	366	80	2,16,457	1,913	1,000	
1833-34					78	1,39,313	4,188	2,930	73	2,02,307	12,240	3,005	Famine and great mortality. Canal failed and crops not sown. Grain 8 seers per Re
1834-35					82	1,46,719	26,095	11,785	79	2,15,113	15,983	6,323	
1835-36					82	1,46,089	8,905	6,673	85	2,26,277	1,903	1,621	
1836-37					79	1,10,105	2,058	1,892	86	2,24,883	319	162	
1837-38					78	1,37,047	2,155	302	85	2,26,609	2,956		Canal failed and great drought. Grain 10 seers per rupee
1838-39					82	1,42,331	4,187	2,890	85	2,26,894	4,032	2,955	Autumn rains failed, but spring rains ample
1839-40					83	1,45,373	979	979	85	2,28,218			Autumn rains scanty
1840-41					83	1,47,113	732	590	85	2,28,156			
1841-42					83	1,48,685	932	932	85	2,28,156			Good crops, but great sickness and mortality
Settlement					78	1,19,258			86	2,11,252			
1842-43					81	1,31,922			85	2,34,551			Autumn rains scanty
1843-44					81	1,25,166			85	2,11,075			Terrible epidemic. Floods stopped the canal
1844-45					86	1,26,067			85	2,39,909	85		Drought and locusts. The canal failed
1845-46					86	1,26,023			85	2,10,760			
1846-47					88	1,27,628			85	2,11,792			
1847-48					88	1,27,618	170	170	85	2,13,010			
1848-49					88	1,27,839	321	170	85	2,13,351			
1849-50					88	1,27,694	13		85	2,13,351	5	5	

Pargannah 1	89	1 3009	51		8		211	10	
1	89	1 3310	161	100	81		105		Autumn crops failed entirely
1	89	1 3331			84		14	14	Severe drought and crops suffered severely
1	89	1 3835			84		114	110	
1	89	1 3805	1 0		81		6	55	Very bad year Drought
1	89	1 3 85	43		81				
1	89	1 3017	1 6	1/6	81				
1	89	1			84		1	3..	
1	89	1			84		6 1	3 31	Rains scanty
1	89	1	9		84		4 8	4 00	Famine Wheat 9 to 11 seer per rupee
1	89	1	3..	C1	8		[illegible]	1 88	
1	88	1	50	1 10	8		1	50	Splendid spring crops
1	89	1	8 041	8	8		14 8	33	Good year
1	89	1	3	184	8				Unusually good year
1	89	1	10		8		515		Rains failed entirely and great injury to cultivation
1	89	1			8				
1	89	1	43	4	8		10	40	Rain failed entirely and great distress
1	89	1			8		54	11	Good year
1	89	1			8				Famine Cattle died and
1	89	1	1 3 0	4	8		090	300	wheat 10 seers per rupee
1	89	1	51	3	8		4	4 6	Good year
1	89	1			8			4	Fair year
1	89	1	-		8	0 7	14		Unusually good year
1	89	1	563	1	8	0 75			Do do
1	89	1	14	1	8	0 30			Do do
1	89	1	1	1	8	0 30			Do do

Statement No XXII.—*Showing* Castes *by* Religion *for each Circle*

NOTE — The cities of Karnal and Panipat are excluded

Serial Number	Caste	Nardak Hindu	Nardak Musalman	Nardak Total	Karnal Khadir Hindu	Karnal Khadir Musalman	Karnal Khadir Total	Karnal Bangar Hindu	Karnal Bangar Musalman	Karnal Bangar Total	Panipat Khadir Hindu	Panipat Khadir Musalman	Panipat Khadir Total	Panipat Bangar Hindu	Panipat Bangar Musalman	Panipat Bangar Total	Total Hindu	Total Musalman	Total Total
1	Jat	2 595		2 [illegible]	1 032	3	1,03[illegible]	1 701	2	1 703	11 03[illegible]	130	11,1[illegible]	22 5[illegible]	568	23 151	41 819	1 003	42 [illegible]
2	Rajput	1 72[illegible]	7 996	9 72[illegible]	610	3,377	4 017	661	1,515	[illegible]	61	53	1 [illegible]7	23[illegible]	3 211	3 47[illegible]	3 319	16 515	19 8[illegible]
3	Ror	5 011		5 011	2 012		2 012	1 101		1,101	115		115	6 03[illegible]	3	6 011	11 610	3	11 613
4	Gujar	675		675	65	176	541	79	11	123	5,191	2 908	8 [illegible]	2 551	1 379	[illegible]	9 [illegible]97	1 597	11 1[illegible]
5	Shekh		216	216		600	600		352	352		1,[illegible]	1,[illegible]		1 476	1 476		1 113	4,11[illegible]
6	Mali	22		22	1,027		1 027	371	1	372	1,177		1 177	1,162		1 162	1 062	1	1 0[illegible]
7	Tagi	167		167	832	115	1 017	69		69	1,171	1 [illegible]	2,[illegible]		16	16	2 012	1 950	3 [illegible]
8	Saiyad		111	111		1,358	1,358		15	15		131	131		75	75		2,0[illegible]3	[illegible]
9	Gadarya	623	1	624	519		519	253		253	8	73	81	105		105	1 311	74	1 [illegible]
10	Rain					331	331					256	256		518	518		1 105	1 1[illegible]
11	Pathan		100	100		327	327		15	15		20	20		329	329		791	791
12	Gaddi		260	260		167	167								50	50		777	777
13	Lodha	12		1	301		301	2		2	165	5	170	12		12	495	5	[illegible]
14	Kamboh				15		15	111		111							[illegible]7		[illegible]7
15	Ahir										1		1	177	4	181	178	4	18[illegible]
16	Bráhman	3,853		3,853	2,009		2,009	2,561		2 561	5 [illegible]		5,[illegible]	11 7[illegible]		11 7[illegible]	[illegible]37		[illegible]
17	Gujrati	23		23	9		9	32		32	131		131	37		37	232		[illegible]
18	Acharj	102		102													102		10[illegible]
19	Dakaut	3		3	39		39				31		31	81		81	1[illegible]		15[illegible]
20	Barági	182		182	161		161	[illegible]		[illegible]	417		417	1,741		1 741	3 [illegible]		[illegible]
21	Faqir	5[illegible]	526	[illegible]51	1	105	[illegible]	9	355	3[illegible]	[illegible]	511	51[illegible]		1 01[illegible]	1 01[illegible]	71	[illegible]32	3 0[illegible]
22	Gosain	54		54	123		123	[illegible]		[illegible]	110		11[illegible]	1[illegible]		11[illegible]	1[illegible]0		4 [illegible]
23	Pirahi		81	81		45	6[illegible]		21	2[illegible]		32	32		21	21		[illegible]	[illegible]
24	Jogi	[illegible]	327	[illegible]	319	125	71[illegible]	2[illegible]		[illegible]	1,[illegible]	6[illegible]	1,010	1 570	175	1 71[illegible]	[illegible]7[illegible]7	1 [illegible]	[illegible]
25	Bhat	101		101	111		111	47		47	47		[illegible]	[illegible]		[illegible]	[illegible]		[illegible]
26	Dum Mirasi		[illegible]	[illegible]		138	138		103	103		1 7	1 7		7[illegible]	7[illegible]		1 [illegible]2	1 [illegible]
27	Nat	80[illegible]	[illegible]7	8[illegible]	11[illegible]	91	[illegible]0	257	13[illegible]	1[illegible]	[illegible]1	131	1,01[illegible]	1 [illegible]	170	1 5[illegible]	1 077	[illegible]	1 [illegible]
28	Bania	2,691		2,691	1,674		1,674	1,261		1,261	[illegible]916		3,916	[illegible]		8 [illegible]	17 60[illegible]		17 [illegible]
29	Banjara	41		41	11	[illegible]	16	7[illegible]		7	133		133	[illegible]		[illegible]	3[illegible]	2	[illegible]
30	Rahbari	37		37				15		15	[illegible]		[illegible]	15[illegible]		15[illegible]	[illegible]		[illegible]
31	Bohra										67		67	1[illegible]		15[illegible]	[illegible]2		[illegible]

3	Ch h	78			1 C60			1,830	3 593		3 5		1C C	1107		1107
33	Dhá k	44		44	9			1	184		1		3 1	9 3		2 9 3
34	Kh tik	5		5	100			3						4 9		1 4
3	Cham	43		43	2 31			2 801	1033		44		8 9 1	235 9		3 5
36	Jhí w	1 3	81	1 53	014	6	1	1 44	503	89	5	311	5 1 3	1 61	C16	13 132
37	M h				4	31			11	41	1	3		56	37	93
38	Bh bh	59	11		91			1	101		1C		20	6	11	6 3
39	B dhi	57	1 1	33	40	3	181	5	1 441	141	1 6	91	2 08	4 693	1 116	6 609
4	L	3		4	91	31	21	43	31	590	9	4	1	4	1 954	3 9
41	K mhar	1, 01	71	1	684	3		531	1 4		1 4	6	2 03	5 87	197	6 (9
4	S	2 8	51	2 9	1	1		94	383		35	60	8 7	1 C 1	1	1 7
43	M y		(		5		19	19		31	3	133	13	11	15	3
44	D	6		6	130			C	16		16		1	601		601
4	N fgr		68	C			114	114		91	9	19	2	1	667	684
46	Ch fr	11	0	1		11	331	331	94	5	C	844	1 044	306	2 0 1	2 319
4	1 h	6	1 3	1	3	13	1	14	4	8	31	4 8	491	113	1 1	1 3
48	J lál	459	24	513	166	4		16	114	43	51	83	1 1	96	097	1 0 4
49	F mb									14	14	4	4		219	19
50	T l		6 4	4		61	4	4		1	74	1 101	1 1	1	1 1	401
51	Q ti		1	14		33				53	r	40	2		818	18
5	an	216		11	4			12					2 7	4		4
53					55		4	4	51		6			1 C	2	1
	Mis ll	17	6	80	5	1		7	4	80	13	9	5 3	6 9	6 1	1
	T t l	3 5 8	6	4 9 0	0 00	111	4,533	6 0	47 6	1 01	0 C	5 031	10 333	2 07 14	5 0 0	2 6 157

Det il of Misc ll neo s Castes

N mb	Caste	N mb	N mb	C t	N mbe	N mb	C te	N mt	N umt	Ca te	N umb
54	J gh l	86	61	S kh Sadh	34	69	Cá	50	5	Báll	63
5	P t	58	63	dh	14	69	Chamár	1	6	H	66
56	Q l	4	63	Káj	13	0	Bh ty	71		C dhll	3
57	K bh	33	64	Kh	4	1	h lg	8	8	G gra	7
58	M	13	6	Kh t	18	72	N g	69			
59	l ál	9	66	K lál	50	3	I t	33			
60	Ch m Sádh	3	67	Káy th	23	4	I b	53		Oth	96
										T t l	1 030

Statement No XXIII.—Showing Principal Castes for the District

NOTE —The cities of Karnal and Panipat are excluded

Serial No	Caste	Land Owners: Cultivators: Male adults	Others	Non-cultivators: Male adults	Others	Total	Others: Cultivators: Male adults	Others	Non-cultivators: Male adults	Others	Total	Grand Total
1	Jat	12,171	27,007	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	Rajput	5,187	11,160	21	101	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	Ror	[illegible]	[illegible]	17	[illegible]	12,211	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	Gujar	[illegible]	8,059	[illegible]	113	[illegible]	[illegible]	[illegible]	[illegible]	223	[illegible]	[illegible]
5	Shekh	70	161	11	[illegible]	[illegible]	[illegible]	[illegible]	72	[illegible]	[illegible]	[illegible]
6	Mali	119	216	1	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	Tagá	1,003	2,271	20	76	[illegible]	173	[illegible]	[illegible]	107	[illegible]	[illegible]
8	Saiyad	377	847	111	[illegible]	[illegible]	[illegible]	[illegible]	7	[illegible]	[illegible]	[illegible]
9	Gadarya	4	16			20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	Rain	[illegible]	31	1	11	167	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	Pathan	60	[illegible]	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	791
12	Gaddi	112	231	11	21	[illegible]	111	210	[illegible]	[illegible]	[illegible]	[illegible]
13	Lodha	9	15			24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	Kamboh	68	[illegible]	1	1	[illegible]	[illegible]	[illegible]	7	[illegible]	[illegible]	[illegible]
16	Brahman	3,887	[illegible]	[illegible]	[illegible]	12,571	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	Bairagi	162	930	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	Faqir	11	22			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	Jogi	[illegible]	[illegible]	21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	Dum-Mirasi						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	Nai	18	[illegible]	19	132	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	Banya	107	177	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1,777	[illegible]	[illegible]	[illegible]
32	Chuhra						[illegible]	171	[illegible]	[illegible]	[illegible]	[illegible]
33	Dhanak	3	1			4	21	2	[illegible]	[illegible]	[illegible]	[illegible]
35	Chamar	12	24			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
36	Jhinwar	39	90	1	11	141	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
39	Badhi	131	[illegible]	51	131	600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40	Lohar	41	89	13	22	165	[illegible]	[illegible]	801	2,012	[illegible]	[illegible]
41	Kumhar						[illegible]	[illegible]	1,814	[illegible]	[illegible]	[illegible]
42	Sunar	5	17			22	40	[illegible]	160	1,217	1,771	[illegible]
46	Chipi	2	2	5	9	18	99	[illegible]	625	[illegible]	[illegible]	2,319
47	Dhobi						69	107	302	700	[illegible]	[illegible]
48	Juláha	12	29			41	12	[illegible]	[illegible]	[illegible]	1,923	[illegible]
50	Teli	21	57			78	137	822	718	[illegible]	[illegible]	[illegible]
	Other castes,	196	73	22	56	347	751	1,110	1,601	4,709	8,171	8,518
	TOTAL	32,121	68,540	1,119	3,105	104,885	16,950	28,931	32,741	78,667	157,272	262,157

NOTE —Figures for smaller castes will be found in Statement No XXII

Statement No XXIV.—*Showing the* Chief Tribes *of the* Principal Castes

NOTE.—The cities of Karnál and Pánipat are excluded

		Numbers			Numbers
Jats	Total	4[illegible]8 3	Pandír		390
Ghatwál		9 [illegible]3	Punwár		334
Jáglán		3 586	Játu		[illegible]39
Mán		1 908	**Rors**	Total	14 463
Ghanghas		1 [illegible]63	*Jogran*		1 364
Nándal		1 504	Dhankar		948
Sandhu		1 460	Khechi		839
Kádián		1 384	Kharangar		[illegible] 6
Kundu		1 [illegible]40	Kokra		607
Deswál		1 [illegible]33	Mupla		557
Barma		1 1[illegible]7	Kuláma		5[illegible]8
Kharal		949	**Gujars**	Total	14 004
Phor		9[illegible]4	Pawál		6 [illegible]87
Sahráwat		910	Chokar		[illegible]5
Dhabta		785	Chamain		1 036
Halwat		60	Kalsan		500
Káli Rámni		[illegible]0	Daharwál		344
Narwál		1	**Saiyads**	Total	[illegible]3
Rajputs	Total	19 964	Zaidi		5[illegible]5
Mandahar		8 351	Musavi		
Chauhán		8 19	Hasan Huseni		414
Tunwar		63			

NOTE.—It would appear probable that the Kathiar Jats of the Jaurá i *b ra* have returned themselves as Malak and have therefore been included among Ghatwáls

Statement No. XXV.—*Showing the* Occupations *of the* Principal Castes *for the Tract*

NOTE —The cities of Karnál and Pánipat are excluded

1	2	3	4	5	6	7	8	9	10	11	12	13
Caste	Serial No	Agriculture	Religion	Commerce	Industry proper to the caste	Other industries	General labour	Service	Mendicancy	Miscellaneous	Total	REMARKS
Ját	1	42,571	3	5			210	46	5	12	42,852	
Rajpút	2	19,121	6	20			567	110	20	20	19,864	
Ror	3	14,467					131	15			14,613	
Gujar	4	13,724					271	9			14,004	
Shekh	5	1,500	31	33		*501	1,131	615	198	†74	4,115	*Weavers 488 †Herdsmen 74
Máli	6	3,411		4			638	8	2		4,066	
Taga	7	3,870					104	3	15		3,992	
Saiyad	8	1,516	31	35			84	296	49	12	2,023	
Gadariya (shepherds and blanket weavers)	9	218		5	*659		181	9		†283	1,355	*Weavers 659 †Herdsmen and shepherds 283
Rain	10	1,091						44			1,135	
Pathán	11	311	5			28	241	201	5		791	
Gaddi	12	674		3			89	11			777	
Lodha	13	341					154	8			503	
Kamboh	14	140					14	3			157	
Ahir	15	135					38	8	1		182	
Brahman, &c	16	23,375	2,620	210		10	541	151	257	21	27,215	
Bairagi	20	2,913	11	1			137	37	387		3,489	
Faqir	21	1,079	35	8		6	214	111	1,486	*63	3,005	*Herdsmen 60
Gosain	22	357					15		118		490	

Firáhi	[illegible]	31					[illegible]		18		[illegible]	
Jogi	4	1 011	5				[illegible]		[illegible]	101	[illegible]	
Bhat		1[illegible]	8	3			14	1[illegible]	04		[illegible]	
Dum Mirasi	[illegible]	30				6[illegible]	1[illegible]	[illegible]	8[illegible]		1 [illegible]	Musicians 6 0
Nái (barbers)		13			3,880		[illegible]	1		6	4[illegible]	
Banya	[illegible]	1 00[illegible]		1[illegible]			8	80		1	1 603	Banya. [illegible] *[illegible] work in the fields.*
Banjára	9	91			4		1[illegible]				30	
Pal bári (carriers)	30	4		4	11[illegible]		51	1[illegible]		1	[illegible]	Camel-drivers and herdsmen [illegible]
B[illegible]l ra	31			14				1			—	
Ch[illegible]hra ([illegible])	[illegible]	[illegible]			11 [illegible]	1	[illegible]	60	[illegible]	7	14[illegible]	Weavers [illegible]
Dhának (scavengers weavers &c.)	[illegible]	30			[illegible] † [illegible]		[illegible]01		5	1[illegible]	[illegible]	Dhanak 96 †Weavers? 131 Scavengers 434
Khatik (tanners and scavengers)	[illegible]4	11			[illegible]	[illegible]	[illegible]			†6[illegible]	4[illegible]	Blank[illegible] weavers [illegible] †Sl[illegible] herds 6[illegible]
Chamar (tanners)		[illegible]		[illegible]	1[illegible]	1 [illegible]	101	[illegible]	[illegible]	[illegible]	[illegible]	Weavers 1 [illegible]
H[illegible]m[illegible]ar (water-carrier)	3[illegible]	4 1[illegible] 1		1 [illegible]	4 [illegible] 1	[illegible]	3,8[illegible]	[illegible]	3	[illegible]	13 1[illegible]	
Malláh (boatmen)	3	1		1[illegible]	11		[illegible]	[illegible]			[illegible]	
Bhurbh[illegible]nja (grain parcher)	38	41			[illegible]		4				[illegible]	
Badh[illegible] (carpenter)	3[illegible]	1 8[illegible]0			[illegible]	[illegible]	18[illegible]	[illegible]			[illegible]	
Kumhár (potter)	41	[illegible]		11	[illegible]		41			40	[illegible]	Carriers [illegible]
Sonár (goldsmith)	4	103			1[illegible]0		[illegible]	[illegible]			1 [illegible]	
Manyár (bracelet maker)	43	[illegible]		[illegible]	1	[illegible]		[illegible]			[illegible]	Brick layers [illegible]
Darzi (tailors)	44	1			[illegible]		1 0	4			601	
Nilgar (dyer)	4	[illegible]			[illegible]		54			8	5[illegible]4	
Chhipi (calico printer)	4[illegible]				1 [illegible]		1[illegible]	[illegible]		[illegible]	[illegible]31	Including 58 tailors and 1 [illegible]
Dhobi (washermen)	4	184			[illegible]		[illegible]				1[illegible]	
Julálha (weaver)	4[illegible]	1[illegible]1			1 [illegible]		11[illegible]	17		6	1 [illegible]4	[illegible]rers [illegible]
[illegible]mba (cotton [illegible]cutchers)	49	9			1[illegible]						1[illegible]	
Teli (oil millers)	50	1 734		[illegible]	[illegible]	[illegible]	[illegible]	18		6	4 0[illegible]	Oil pressers 16[illegible] cotton scutchers [illegible]
Qa[illegible]b (butchers)	51	115		[illegible]8	[illegible]	[illegible]	[illegible]1	[illegible]		†18[illegible]	81	*Bopár (generally meaning cattle-dealing) [illegible] †Costermongers 18[illegible]
Sán		1[illegible]3					07		9	[illegible]	48	Herdsmen 30
Nat	53						[illegible]		5		1 [illegible]	

Part I

Statement No XXVI.—*Showing* Villages, Area, *and* Revenue *held by the* Principal Castes *in Acres and Rupees*

		Jats	Rors	Tagas	Gújars	Rajpúts	Saiyads	Miscellaneous castes	Skinner Estate	Mandals and their representatives	Total
Nardak	No of whole villages	7	14		4	20		3		15	63
	No of parts of villages	$1\frac{1}{6}$	$2\frac{1}{6}$		$\frac{3}{4}$	$3\frac{2}{3}$		$2\frac{1}{4}$		1	11
	Total area	17,427	18,244		4,546	87,982		7,286		16,633	152,118
	Cultivation	6,604	5,952		1,877	21,169		2,109		3,443	41,154
	Pasture land	9,792	9,957		1,916	55,618		4,119		11,566	92,998
	Total population	5,848	5,782		1,014	26,720		1,574		1,610	42,578
Karnal Khadir	No of whole villages	4	2	3	3	16	6	6	1	1	42
	No of parts of villages		$1\frac{1}{12}$	$\frac{1}{2}$		$1\frac{1}{2}$		$1\frac{11}{12}$			5
	Total area	4,071	4,927	4,522	6,162	21,725	8,651	5,237	251	383	55,929
	Cultivation	2,477	2,858	2,912	2,573	10,189	5,288	2,770	213	203	29,483
	Pasture land	734	1,436	1,134	2,773	6,953	1,657	1,609	15	162	16,473
	Total population	2,501	4,379	2,800	1,422	11,488	5,980	2,766			31,336
Karnal Bangar	No of whole villages	7	3			7		1	4	2	24
	No of parts of villages	$3\frac{2}{3}$	$2\frac{1}{12}$			$\frac{2}{3}$		$1\frac{7}{12}$			8
	Total area	23,930	10,209			17,266		9,373	4,445	1,131	66,354
	Cultivation	13,138	4,766			7,327		6,039	1,129	445	32,844
	Pasture land	5,762	3,235			4,404		1,701	525	166	15,793
	Total population	11,528*	3,515*			7,429		2,999*	704	121	*26,296
Panipat Khadir	No of whole villages	25		9	32			12			78
	No of villages partly owned	$2\frac{3}{4}$		$1\frac{1}{4}$	$3\frac{1}{6}$			$3\frac{5}{6}$			11
	Total area	40,754		10,381	39,489			16,661			107,285
	Cultivated	23,186		6,075	20,169			11,834			61,264
	Culturable	12,356		2,751	14,408			2,714			32,229
	Waste	5,213		1,553	4,776			2,250			13,792
	Population	30,180		6,690	20,583			2,328*			*59,781
Panipat Bangar	No of whole villages	40	10		10	4		2	13		79
	No of villages partly owned	$3\frac{1}{2}$	$2\frac{2}{3}$		$1\frac{1}{4}$			$1\frac{5}{6}$	$\frac{3}{4}$		10
	Total area	95,224	33,815		22 340	14,204		5,840	17,806		189,229
	Cultivated	54,904	18,578		11,789	6,069		3,523	7,499		102,362
	Culturable	16,822	5,400		2,701	3,508		26	4,777		33,234
	Waste	23,499	9,839		7,856	4,627		2,288	5,524		53,633
	Population	59,655	19,206		10,658	5,558		2,318	5,058		102,453

* Excludes the cities of Karnal and Panipat

NOTE —These are the preliminary assessment figures and do not agree exactly with the final areas

Part II

Statement No XXVI —Showing Villages Area and Revenue held by the Principal Castes in Acres and Rupees

Castes	Nardak Area	Nardak Revenue	Karnal Khadir Area	Karnal Khadir Revenue	Karnal Bangar Area	Karnal Bangar Revenue	Panipat Khadir Area	Panipat Khadir Revenue	Panipat Bangar Area	Panipat Bangar Revenue
Jat Hindu	[illegible]845	4 36	1 10	[illegible]	98 1	1 17	10 3	46 [illegible]	53 319	560
Musalman							118	[illegible]	665	86
Rajput Hindu	[illegible]04	97	4 [illegible]	4 56[illegible]	3 1	[illegible]60	[illegible]	66	[illegible]	47
Musalman	11 [illegible] 1	4 [illegible]	1 [illegible]	78 [illegible]	[illegible]08	1 0[illegible]	1 25[illegible]	4 81	6,[illegible]48	3 065
Ror	4 06[illegible]	[illegible]	[illegible]	3[illegible]	4 1[illegible]	30[illegible]	20[illegible]	341	14 [illegible]3	13,[illegible]1
Gujar Hindu	1,561	1 11	1,8[illegible]3	[illegible]81[illegible]	1[illegible]	110	16 66[illegible]	16[illegible]	8 [illegible]3	9 710
Musalman			341	3 [illegible]			[illegible]110	[illegible]3	83[illegible]	3 11
Sheikh	19	8	16[illegible]	1[illegible]	[illegible]9	[illegible]0	43	8[illegible]	39	51
Ansari							6	7 1[illegible]		
Pirzadah							115	63		
Mali	43	5			[illegible]1	29[illegible]	[illegible]	13	16	534
Taga Hindu			1 101	60[illegible]	[illegible]	1[illegible]	8[illegible]1	4,[illegible]10		
Musalman			[illegible]5	600			1 3[illegible]	401		
Saiyad	561	6	4[illegible]	[illegible]60	6[illegible]	6	600	1 14	1	14
Rain			5 [illegible]	810	633	4[illegible]	6	1 09		
Pathan	[illegible]004	0[illegible]	[illegible]	630	64	[illegible]	1 [illegible]	3 [illegible]4	40	
Kamboh					[illegible]6	34				
Mughal	[illegible]	10	1	61			61	1 [illegible]0		
[illegible]	460	[illegible]00	11[illegible]	71						
[illegible]	[illegible]090	1 051	3	1	1 48[illegible]	[illegible]				
[illegible]			[illegible]3	3	[illegible]0	[illegible]	8	8[illegible]	16 [illegible]00	1[illegible]0 [illegible]
Brahman	1 40[illegible]	86[illegible]	1 [illegible]3	311	1 60	1 6[illegible]	3 074	6 091	5 64	8 113
Bairagi	1 160	[illegible]4	4[illegible]3	86[illegible]	1 090	1 [illegible]	34	4[illegible]	1 6[illegible]	1 341
Gosain							6	14[illegible]		
Kayath							31	1 000		
Nai		[illegible]	8	11	1				0	89
Banya	563	1 17	60	[illegible]	53[illegible]	5	4 3	10	501	7 1
Kal[illegible]r					40	5[illegible]	[illegible]4	1 [illegible]	31	38
Bohra	4[illegible]	1				6	67	10	64	8
Julaha					11	6[illegible]				
Qassab							1[illegible]	600		
							63 410	1 [illegible]484	64 [illegible]6	13 493
							3 [illegible]	181	1 61	3 9
[illegible]ty							63 7[illegible]0	1 366[illegible]	6[illegible]9	1 378

Owners rates excluded

Note —The above figures are roughly worked out and represent only area and revenue held in severalty that is to say the shares in the common land of a village held by each caste have not been included

Showing Alienations *of* Land

Karnal Bangar					Panipat Khadir				Panipat Bangar				
Cla I	Class II	Cl III	Clas IV	Total	J ts	G j r	Mi c llan ous an l mix d	Total	Clas I	Cla s II	Clas III	Class IV	Total
3 G0	2 646	6 0	18 99	814	3	1 1 4	1 0	3 464	1	1 31	1 0	3 43	0 00
1		3	7	8	8	20	1	18	114	1 0	1	2	37
18	11	66	0	1 6	34	0 3	5	1,0	913	310	318	470	2 61
201	11	5	6	1 047	4 0	6 3	6 1	1 6	1 0	1 080	3	40	9 6
		6		81	11	50	44			46		1	237
17	2	4	1	1	16	1 0	4	2	3	3	1	6	6
		3	4	6		4	4	112	3	16		81	1 4
1	3	38		300	200	0	110	60	113	6	6	10	4 6
			101	1 0	313		20	3	300	103	5	112	93
1	1 1	613	99	1 31	6 0	3	94	3 6	1 146	1 14	34	38	33
6 0	4 6	8 0	5 3	5	8	5	6 3	4 4	5	4 7	0	2 1	3 4

a ca is mortg ged an l still more of it is no l nger in the l ands of the original owners as ii Statement No VII